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THE DOCTOR AND SOCIALIZED MEDICINE*

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NEW ORLEANS

For the first time in the 66 years of the existence of this Society a president has called a special meeting to be known and designated—"Past Presidents' Night." The purpose of this unprecedented session is to do honor to those, who in preceding years, have wielded the gavel over this organization. It is to be a recognition of their faithful and conscientious service to organized medicine. It is a testimonial and an appreciation of their labors and their accomplishments, a tribute to the time they have so freely given, the efforts they have expended and the thought they have devoted to the interests and the welfare of this body. It could be, of course, accepted also as perhaps a little taffy that is being fed to us to sweeten the inroads of the passing years, to help us feel that our usefulness to the cause is not entirely spent and that the hardening of our cerebral vessels has not progressed to too alarming or too critical a degree.

I feel particularly honored in being asked to take part in the exercises on this occasion, because there are so many of my fellows in this long line of Past Presidents whose talents and abilities far out-weigh my own and who could more adequately and more competently do justice to this pleasurable assignment. Suffice to say that I am delighted to be the means of expressing, on this significant evening, the gratitude and the thanks of the Past Presidents for this generous gesture on the part of the Society and its Officers.

There are those in past years who have presided over this Society with dignity and ableness, and who have brought to the office great executive ability. Their judgment and their courage have, with the aid of their respective Boards, weathered heavy storms in the past inimical to the interests and the future of the profession, and on an even keel have again guided the affairs of the Society into tranquil and peaceful waters. To these men we owe a genuine debt of gratitude. They have carried out the duties of their office to the full for they were men of character and principle. This Society has been quite fortunate in having as its head a number of such Presidents in the past.

It is customary to felicitate a man on his accession to a high office, and rightly so, for he is to be congratulated on his advancement and he needs the good will, the best wishes and the cooperation of his associates. Unfortunately, glory and honor always carry with them responsibilities and obligations and it is not at all an uncommon observation to find those in high places who forget these handicaps of adulation. They become self-centered, self-sufficient and sublimely oblivious to what is justly expected of them. To be sure these are always men of personality and character, but they lack the co-partner of character which is principle. As someone has quite correctly said, "Character by itself cannot be trusted without principle." There are many examples which show this to be true

*Read before the special meeting of the Orleans Parish Medical Society honoring past-presidents, May 22, 1944.

—history is replete with men of strong character uncontrolled by principles who have proved themselves unsafe to follow. Caesar and Napoleon and now Hitler are examples of great talent and executive ability under the control of inordinate ambition instead of moral principle. There are many others who, mighty in intellectual power and energy, enabling them to reach dizzy heights, have done great harm because their practice was abominable for want of principle.

In its long and honorable history, in its brilliant and praiseworthy traditions, the medical profession never more sorely needed men of character and principle than it does today. We are faced with powerful enemies from without, who would destroy the ideals and practices of Aesculapius and Hipprocrates, who would tear down the great principles to which generations of physicians have dedicated their lives.

Medicine is the oldest of the professions; it antedates the Christian religion; it is older than the civil law. It embraces all qualified professional competitors, but this must be a healthy and not a baneful competitión. One of the objectives of organized medicine is to establish fair and equitable means through which healthy competition may be maintained without detriment to the profession as a whole. Organized medicine strives to improve and to build by setting up an ideal for each individual practitioner, knowing that as the individual is benefited, the profession as a whole will advance. In thinking of the accomplishments of the builders in other vocations we find that the outstanding ones are those who build upon foundations of service—those of us who live and work in organized medicine will be those who have served.

Today, organized medicine is beset upon many fronts by evils which seek to disrupt all that is good and worth while in the practice of medicine. As we observe the radical forces which seek to force a place for themselves in our social make-up, it seems amazing and incredible that such influences should find nourishment in our American soil of free enterprise and individual industry. It is a unique and characteristic result of even minor social revolutions that they become progressively aggressive and increasingly demanding—and we of the medical profession had best look to our knitting and defend the character and principles of medical practice with all the power at our disposal. Our defence should start as individuals, with more loyalty to our Parish and State Medical Societies and more loyalty of the Parish and State Medical Societies in their turn to the parent organization —The American Medical Association—for the need of a united stand has never been greater.

Some doctors are represented to be untroubled by these invasions into the field of medicine for they are independently wealthy and are devoid of the aims and the ideals of the healing art—they are doctors by Medical School decree, but that only—they possess neither the character nor the principle, the sympathy or the understanding of the true physician and his relationship with the sick, the needy and the maimed—some there are who are reported to have linked their abilities with political possibilities and will be on the ground floor, no matter what may happen—others are possessed of that innate quality which renders them deaf, dumb and blind to all except the immediate problems of teaching and research. If political medicine becomes a reality these gentlemen will find no incentive either for teaching or for research—but to offset these, we have in our ranks the priests of medicine, the bearers of the standard, those upon whom the Caduceus is indelibly stamped, the self-sacrificing, the faithful and the loyal; such a diversity of temperament and opinion is possible only because of the democratic nature of medical organization. In the present emergency, however, petty differences and small jealousies must be laid aside in the interest of united action, not only for the preservation of the present system, but, indeed, for the welfare of the entire nation.

The present system of dispensing medical care insures the health of our citizens—

such changes as may be necessary must come from the profession itself, whose democratic principles permit of free discussion and majority action—it is the responsibility of each individual physician to study, and to work, in so far as his busy days permit, toward the preservation of the sound American traditions of medical practice.

Search for truth, self-sacrifice and altruism have ever been present in doctors of medicine and as long as these prevail the health of the country will remain at the highest level which it is possible to maintain. We owe it to our medical comrades in the Armed Forces here and in foreign lands, to fight for their interests, so that when they come back to us we may truthfully say that we have kept the faith, that we have protected our common ideals and medical traditions. The practice of medicine may not be just as they left it, to be sure, but at least they will recognize it and can take up where they left off and earn their reward by individual effort—not by political preference.

Past Presidents of the Orleans Parish Medical Society to whom this meeting is dedicated—the silver lining to this pernicious cloud of regimented medicine lies in the fact that in every parish, county, city, state and national medical body there are older leaders—Past Presidents many—whose maturer years and experience equip them best to fight for the unfettered and the free pursuit of our vocation.

This Society salutes you Past Presidents; you well deserve their recognition and may your years of continued service be many. Our President, Dr. Zander, is setting a precedent for constructive activity in advancing the interests of this Society. His administration will go down, I feel sure, as one of the most productive in the annals of this organization. He seeks your advice, he seeks your counsel and your active participation in the business affairs of the Society and none of you, I know, will deny it to him.

The appeal for man power is nation wide—in every avenue of endeavor there is a great clamor for men—but in no profession is there greater demand for man power than is ours at this time—the power and the influence of men of character and of principle.

In closing may I quote to you these words of J. G. Holland who said:

Men whom the lust of office does not kill,
Men whom the spoils of office cannot buy,
Give us men
Men from every rank,
Fresh and free and frank;
Men of thought and reading,
Men of light and leading,
Men of faith and not of faction,
Men of lofty aim and action;
Give us men—I say again!
Give us men!

———o———

RABIES*

A TEN-YEAR SURVEY OF THE PASTEUR INSTITUTE OF CHARITY HOSPITAL OF LOUISIANA AT NEW ORLEANS

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DEFINITION

Rabies is an acute infectious and contagious disease affecting many species of animals. It is caused by a neurotropic filtrable virus. The infectious agent is transmitted from animal to animal by the introduction of infected saliva through the broken skin usually by the bite of a rabid animal. The disease is invariably fatal to man and is generally fatal to other species of infected animal.

HISTORICAL

Rabies has been known since ancient times. Aristotle[1] recognized the disease and the fact that its mode of transmission was by the bite of a rabid dog. Galen[1] recommended the excision of wounds inflicted by

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the bite of a rabid dog to prevent development of the disease. The infectivity of the saliva for dogs was demonstrated by Zinke[2] in 1804; for herbivora, by Berendt[2] in 1822; and for man, by Magendie.[2] By injecting saliva from a rabid dog into the brains of rabbits, Galtier[2] studied the etiology of and immunization against the disease in 1879-1881. In 1881-1889 Pasteur proved that the etiologic agent was chiefly concentrated in the central nervous system. He prepared an infectious material of known and constant virulence from infected brains and spinal cords and used it in immunization against the disease. The filtrability of the etiologic agent was demonstrated by Remlinger[2] and Riffat Bey[2] in 1903. The discovery of specific inclusion bodies in the central nervous system by Negri[2] in 1903 facilitated the diagnosis of the disease. The Health Organization of the League of Nations,[3] founded after the first World War, was responsible for gathering valuable data concerning the disease and the results of its treatment.

GEOGRAPHIC DISTRIBUTION

Rabies is a cosmopolitan disease which has occurred in all parts of the world except in Australia and Hawaii.[4]

For several years in the beginning of the nineteenth century in Europe the disease prevailed as an epizootic. Wolves, foxes and domestic animals were affected particularly but the disease was also observed in man. The incidence increased over the whole European continent and British Isles between 1819 and 1829. Subsequently, many countries were entirely free from the disease. It became prevalent again particularly in Central Europe, following the first World War. Since then attempts have been made to eradicate the disease by rigid enforcement of control measures, and Great Britain, Denmark, Sweden, Norway, Belgium and Switzerland have been free from rabies for many years.

In North America, rabies was formerly widespread and is still endemic in many localities in the United States. Denison and Dowling[5] state that "Birmingham has been considered by some as the 'rabies capital of North America and possibly of the civilized world.'" During the seventeen years from 1922-39 in Alabama, 11,218 animals were diagnosed positive for rabies by laboratory examination, 42,947 individuals received anti-rabies vaccine and 48 persons died of the disease.

EPIDEMIOLOGY

Rabies is primarily a disease of carnivorous animals. From 80 per cent to 90 per cent of the cases occur in dogs. Cats, wolves, foxes and other carnivorous animals may also develop and transmit the disease. In Trinidad and South America the vampire bat is subject to infection and causes spread of the disease. Man is secondarily infected by exposure to rabid animals.

INCUBATION PERIOD

The incubation period of rabies following exposure varies within wide limits. Cases can occur within ten days but may be delayed as long as two years following the bite of a rabid animal.[1] The average period seems to be about two months.

PATHOGENESIS

The virus is conveyed mainly by way of the nerves from the lacerated area of a bite to the central nervous system. The lymph and blood stream may also disseminate the virus throughout the body.

PATHOLOGY

The significant lesions are present in the central nervous system. The presence of hyperemia and edema are the only gross anatomic changes. Microscopically, the lesions which are both degenerative and inflammatory occur chiefly in the segment of spinal cord or brain which receives the nerves from the site of inoculation of the virus. The degenerative changes consist of vacuolization, hyalinization and chromatolysis of the nerve cells. Inflammatory changes are characterized by foci of edema, hyperemia, petechiae and diffuse and perivascular polymorphonuclear leukocytic infiltration. Later, the lesions consist of areas of gliosis infiltrated by macrophages and lymphocytes. These changes, while characteristic, are not pathognomonic of rabies, since they occur in other types of encephalomyelitis.

The pathognomonic feature of the disease is the presence of Negri bodies within nerve cells of the central nervous system. Typically, these bodies are ovoid or rounded and vary from one to thirty microns in size. Their size may vary markedly in a single brain. The majority may be large, medium sized or so small as to be visible only when viewed under the oil immersion objective of the microscope. They stain red with eosin-methylene blue, may be homogeneously glassy or granular and contain one or more round or rod-like granules. These granules may be located centrally, peripherally, or may be diffusely scattered. They measure from 1 to 4 micra in size and stain dark or light blue. In rabbits affected with fixed virus, Negri bodies may be absent or appear as tiny eosinophilic granules.

The exact nature of the Negri bodies is unknown. Negri regarded them as parasites and as the etiologic agent of rabies. Others regard them as degenerative products of cells. The majority of observers however, regard them as the etiologic agent, representing virus-colonies. They are present most abundantly in the hippocampus and cerebellum but may also be numerous in the medulla, basal ganglia and cerebral cortex. As a rule, their size and number are directly proportional to the duration of the symptoms. Exceptions to this are so frequent, however, that reliance cannot be placed on this generalization.

RELATION OF SYMPTOMS TO LESIONS

The symptoms are dependent upon the progression of the pathology. In the early stage of the disease the action of the virus is one of stimulation of the cells of the central nervous system. The first symptom is frequently pain at the site of the bite, because of changes in the spinal cord corresponding to the segment receiving the nerves from the site of inoculation. As the brain becomes affected, the classical symptoms of increased nervous excitability, restlessness, apprehension and bizarre behavior become manifest. At this stage of the disease carnivorous animals, such as the dog, are apt to be vicious, and humans are bizarre in their behavior. As the disease progresses, the effects of irritation and stimulation are replaced by paralyses which result from degenerative changes in the nerve cells. The voluntary muscles become paralyzed at the level corresponding to that of the spinal cord involvement. The paralysis ascends and when the medulla becomes involved the vital centers are destroyed. One of the most common terminal manifestations of the disease is paralysis of the muscles of respiration. The hyperglycemia, glycosuria, polyuria and hyperpyrexia so commonly present are probably due to pathologic changes of the brain stem in the vicinity of the fourth ventricle.

DIAGNOSIS OF RABIES

Although a presumptive diagnosis of rabies in animal and man can be made from the symptoms by an experienced observer, a positive diagnosis in either can be made only after death. In this respect rabies differs from other infectious diseases in which laboratory tests confirm the diagnosis on the living patient.

The symptoms which lead to a presumptive diagnosis in animals include change of disposition and character, wandering, restlessness, avoidance of familiar environment and persons, uneasiness, tendency to bite, change of appetite, tremors, salivation, paralyses, especially of the extremities or lower jaw, and convulsions. Many of the same symptoms occur in man. The history of a bite by a suspicious or proved rabid animal provides additional evidence.

A positive diagnosis may be established by microscopic or biologic examination of the brain tissue of an animal that has died or has been killed following prostration from fully developed rabies.

The microscopic demonstration of typical Negri bodies in the brain tissue of a suspected animal establishes the diagnosis. Two technics are in use for the demonstration of Negri bodies. One is the impression method in which unfixed sections of Ammon's horn are impressed on slides and differentially stained. This method is rapid but less accurate than the second technic, the fixed paraffin section method. In this

method, sections of cerebellum and Ammon's horn are fixed and dehydrated in acetone, embedded in paraffin, sectioned and stained with differential stains.

The final, conclusive test for rabies is animal inoculation. Formerly rabbits were used for the test but these were unsatisfactory because the incubation period varied from animal to animal and was frequently from two to six weeks. Recently, white Swiss mice, two to three weeks old, have been found to be highly susceptible to the virus of rabies. The suspected material is injected intracerebrally. If the virus is present, the mouse will become ill on the seventh to tenth day, and die on the ninth to twelfth day. The brain will show Negri bodies after the fifth or sixth day. Inoculation tests, though conclusive, are time consuming and require facilities and personnel which are not always available. Accuracy has been stated to be 4 per cent to 10 per cent greater than that obtained by direct examination of the brain for Negri bodies.

NATURE AND PROPERTIES OF RABIES VIRUS

The discovery by Remlinger and Riffat Bey[2] in 1903 that the infectious agent of rabies was a filtrable virus has been confirmed by numerous investigators.

Two types of virus are recognized: (1) street virus is the type which is found occurring naturally in animals; (2) fixed virus used in the preparation of anti-rabies vaccine is that type in which certain properties have become fixed and constant. The two types differ markedly in their characteristics.

Street virus is characterized by: (1) a long incubation period following inoculation; (2) relatively high infectivity following peripheral inoculation; (3) production clinically of either the manic "furious" or the paralytic "dumb" type of disease, and (4) the presence of Negri bodies in the nerve cells especially of Ammon's horn and the cerebellum.

Fixed virus is produced by serial passage of street virus through animals, chiefly the rabbit or mouse. The number of such passages required to fix a virus varies from strain to strain. The ordinary street virus requires from 30 to 50 passages. Other very virulent strains known as reinforced strains become fixed after relatively few passages. Strains of very low virulence are resistant to fixation even after prolonged passage. Fixed virus is characterized by: (1) a short incubation period of five to eight days; (2) a decrease in susceptibility of animals to the virus when they are injected by other than the intracerebral or subdural route; (3) development of the paralytic type of disease, and (4) the disappearance or reduction in size of the Negri bodies.

In 1936 Galloway and Elford,[6] using the collodion membrane ultra-filtration technic, reported the size of fixed virus to be between 100 and 150 milli micra. Paic, et al.,[6] in 1938 estimated the size of street virus to be between 160 and 240 milli micra.

TREATMENT

Treatment is divided into two phases, local treatment and prophylactic immunization. Many authorities recommend local treatment similar to that employed for any other type of wound and in addition cauterization with fuming nitric acid as early as possible following the injury. The prophylactic immunization against rabies was introduced in 1884 by Louis Pasteur and has come to be known as the Pasteur treatment. The vaccines employed throughout the world today consist of emulsions of rabbit brain or spinal cord, containing either living or killed fixed rabies virus. The Semple type of phenol-killed vaccine is most commonly employed. Some of the major advantages offered by the use of this type of vaccine are: (1) decentralization of treatment; (2) infrequency of neuroparalytic accidents, and (3) simplicity of manufacture.

SEMPLE VACCINE

Semple vaccine is prepared from the spinal cords and brains of rabbits which have been infected with fixed rabies virus. The finished vaccine consists of a 4 per cent emulsion of nervous tissue in physiologic saline containing phenol in 0.5 per cent concentration.

METHOD OF ADMINISTRATION OF ANTI-RABIC VACCINE

Our method of treatment is a daily, 2 c. c. subcutaneous injection of the vaccine until a total of 18-25 injections has been given. Patients bitten on the extremities or trunk receive 18 injections, whereas those bitten on the head, face or neck or those who have sustained multiple, severe lacerations receive 21-25 injections. Although the injections may be given in any part of the body, the arms and abdomen are the usual sites of election for vaccination. Because of minor local aseptic inflammatory reaction which not infrequently occurs, it is advisable not to administer the vaccine in the same location over two successive days.

INDICATIONS FOR PASTEUR TREATMENT

The Pasteur treatment is given to any person who has been bitten or scratched by a rabid dog or in whom the saliva of such a dog has reached any recent, open wound. Patients bitten or scratched by a stray dog, in which the presence of rabies cannot be excluded should also receive Pasteur treatment. It is not advised in any other type of exposure. However, in some instances where definite bite or scratch by a rabid animal cannot be ruled out, as is frequently the case with infants or children, the Pasteur treatment must be given, especially in a community where rabies is prevalent.

COMPLICATIONS FOLLOWING PASTEUR TREATMENT

Benign reactions, such as general malaise, fever, headache, local erythema at the site of injection and urticaria, are of frequent occurrence during the administration of Pasteur treatment. They are of no grave consequence and should not influence the patient to discontinue treatment before completion of the prescribed course. Subcutaneous abscesses due to faulty aseptic technic may also occur.

Severe reactions such as neuroparalytic accidents are extremely rare. World wide reviews[3] place the incidence at about one in 8,000 cases treated with phenolized vaccines and about one in 3,500 cases treated with vaccine containing virulent rabies virus. They may occur in the form of peripheral neuritis, usually involving the facial nerve, or as an ascending myelitis, the most severe form of which, the Landry type, has a mortality of about 30 per cent. They occur during the latter part of the course of treatment, being most frequent in the apprehensive and intellectuals. They rarely occur before 15 years of age. Recovery, which may be rapid and complete, or slow and incomplete, is the rule. The cause is unknown.

PASTEUR INSTITUTE OF CHARITY HOSPITAL OF LOUISIANA AT NEW ORLEANS

The Pasteur Institute of the Department of Pathology of Charity Hospital was established in October, 1903, by special resolution of the Board of Administrators of the hospital.[7] The Institute began to administer Pasteur treatments to patients on December 20 of that year. During the first year, 1904, anti-rabies vaccine was administered to 143 patients and of these two died of rabies. The following year 118 were treated, with one death.

From 1903 to 1910 the original live dried cord vaccine of Pasteur was in use. From 1910 to 1929 the Harris method was employed in manufacturing the vaccine. This is also considered to be a live vaccine and is prepared by freezing with CO_2 snow and dialysis in vacuo. In 1929 the Semple type of phenol killed vaccine was adopted and is the method in use at the present time.

The functions of the Pasteur Institute are: (1) the diagnosis of rabies from the brains of suspected animals and man; (2) manufacture of anti-rabies vaccine, and (3) administration of anti-rabies vaccine to persons bitten or injured by known rabid or stray animals.

The following survey comprises an analysis of 12,237 patients admitted to the Pasteur Institute Clinic and 3,003 animal brains submitted to the Pasteur Institute for examination and diagnosis during the period from January 1, 1934, to October 31, 1943, inclusive.

The data from these materials were analyzed according to the following points:

1. The number of patients who received treatment.

2. The number of animal brains found positive for rabies.

3. The species of animals causing the exposure and the deaths from rabies.

4. The incidence of rabies in each of the 10 years surveyed.

5. The influence on mortality of injury by a proved rabid animal or by a stray animal.

6. The influence of the location of the injury on mortality.

7. The influence of the interposition of clothing on mortality.

8. The influence of race on mortality.

9. The influence of the interval of time between exposure and initiation of treatment on mortality.

THE NUMBER OF PATIENTS WHO RECEIVED TREATMENT

Twelve thousand two hundred and thirty-seven patients applied to the Pasteur Clinic (table 1). All of these patients applied because of some type of exposure to a proved rabid animal or to one suspected of having rabies. It was deemed *unnecessary* to administer prophylactic treatment to 8,091 of these; preventive treatment was administered to 4,146.

TABLE 1

TOTAL NUMBER OF PATIENTS APPLYING TO PASTEUR INSTITUTE CLINIC FOR TREATMENT FOLLOWING EXPOSURE TO SUSPECTED RABIES

Jan. 1, 1934 to Oct. 31, 1943 inclusive

Total patients applying to Pasteur Clinic	Treated	Pasteur treatment unnecessary
12,237	4,146	8,091

The type of exposure to rabies virus determined whether or not the patient received treatment. If the animal remained alive and well, or if the dead animal was proved not to have rabies, or if the exposure was so indirect that in our opinion there was no possibility of contracting rabies, anti-rabies vaccine was not administered.

Of the 4,146 patients who received treatment 3,273, or 79 per cent, were treated because they had been *injured* by a rabid animal. Only 873, or 21 per cent, received treatment because of exposure without injury. This latter figure is considerably lower than that reported from Birmingham by Denison and Dowling[5] who state that 43.3 per cent of the persons on whom they have data received treatment without having been bitten. The problem in Birmingham concerns rabies in home-owned dogs or pets while unidentified strays largely constitute the problem in New Orleans. It would seem therefore that there is greater likelihood of injury being caused by the stray dogs, while exposure without injury is more likely in pet dogs.

THE NUMBER OF ANIMAL BRAINS FOUND POSITIVE FOR RABIES

A total of 3,003 animal brains were submitted to the Pasteur Institute for examination and diagnosis (table 2). One thousand three hundred three, or 43.4 per cent, of these were positive for Negri bodies by microscopic examination of paraffin sections. Negri bodies were not present in 1,573, or 52.4 per cent. One hundred twenty-seven, or 4.2 per cent, were unsatisfactory for microscopic examination. The high incidence, 43.4 per cent, of animal brains which showed Negri bodies indicates that rabies is a widespread disease in animals, especially dogs, in this locality.

TABLE 2

ANIMAL BRAINS EXAMINED, PASTEUR INSTITUTE

		Per cent
Positive for Negri bodies	1,303	43.4
Negative for Negri bodies	1,573	52.4
Unsatisfactory for examination	127	4.2
Total	3,003	100.0

Our data indicate that rabies is increasing in the animal population. In 1941, 18 per cent of all animal brains submitted were positive for Negri bodies. This figure increased to 39 per cent in 1942 and has reached 50 per cent in the first 10 months of 1943.

Denison and Dowling[5] believe that there is a rise in the incidence of rabies in dogs in Birmingham, Alabama. This belief is based on an increase in the percentage of positive dog brains, and it is their opinion

that this rise represents a deepening of the animal reservoir of infection.

THE SPECIES OF ANIMAL CAUSING THE EXPOSURE AND THE DEATHS FROM RABIES

Of the 4,146 patients who received anti-rabies treatment 3,737, or 90 per cent, were exposed to dogs (table 3). The seven

TABLE 3

TYPES OF SUSPECTED OR PROVED RABID ANIMALS CAUSING EXPOSURE TO PATIENTS RECEIVING ANTI-RABIES TREATMENT

Species of animal	Patients treated		Number deaths	Per cent
Dog	3,739	(90 %)	7	0.18
Cat	293	(7 %)		
Cow	36			
Rat	10			
Squirrel	6			
Rabbit	4			
Hog	4	(2.0%)	0	0.00
Human	3			
Horse	3			
Mule	2			
Monkey	1			
Raccoon	1			
Not stated	44	(1.0%)		
Total	4,146		7	0.16

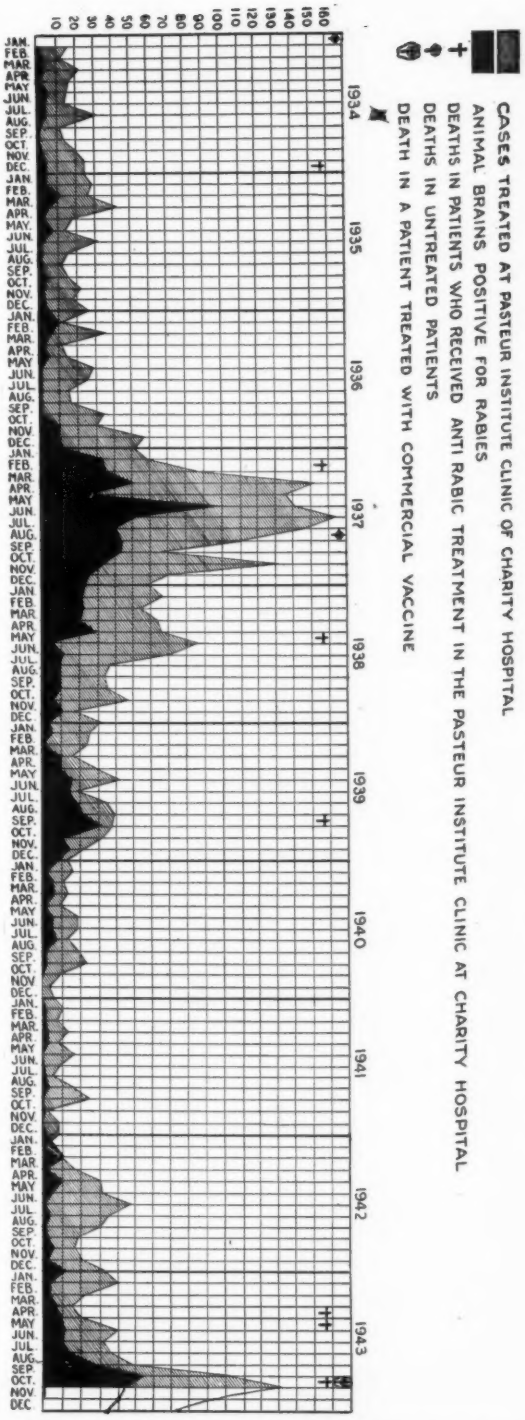
human deaths from rabies occurred in this group, a mortality of 0.18 per cent. Seven per cent of the suspected animals were cats and 2 per cent included all other animals. Three patients were given Pasteur treatment following intimate exposure to a case of human rabies during the several days of illness. No statement of the species of animal causing exposure was made in 44, or 1 per cent, of the cases.

These data indicate that dogs account for the great majority of all exposures for which patients receive anti-rabies treatment. Dogs are also largely responsible for transmitting the disease to other animals both within and outside of their own species.

In the past ten years in New Orleans there have been 10 proved deaths from rabies—four within the past six months. All were victims of this disease as the result of bites from stray dogs which were rabid.

THE INCIDENCE AND MORTALITY OF RABIES DURING THE TEN YEAR PERIOD FROM JANUARY 1934 TO OCTOBER 1943

The incidence of rabies in New Orleans from January 1, 1934, through October 31, 1943, is shown in the following graph.


RABIES IN NEW ORLEANS 1934 - 1943
CASES TREATED AT PASTEUR INSTITUTE CLINIC OF CHARITY HOSPITAL
ANIMAL BRAINS POSITIVE FOR RABIES
DEATHS IN PATIENTS WHO RECEIVED ANTI RABIC TREATMENT IN THE PASTEUR INSTITUTE CLINIC AT CHARITY HOSPITAL
DEATHS IN UNTREATED PATIENTS
DEATH IN A PATIENT TREATED WITH COMMERCIAL VACCINE
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943

The lower line of this graph represents the number of dog brains positive for Negri

bodies. The upper line represents the number of patients treated in the Pasteur Institute Clinic during the same period. The crosses represent human deaths from rabies. Two patients were not treated with anti-rabies vaccine (encircled crosses in 1934 and 1937). One patient is included through the courtesy of Dr. E. H. Lawson of Baptist Hospital.

Nineteen thirty-seven is often referred to as an epidemic year in New Orleans. As a matter of fact the epidemic began late in 1936, reached its peak in 1937, continued through the first six months of 1938 and bordered on the epidemic level for the last six months of 1938. During the last 8 months of 1939, the epidemic recurred and reached a high level in October. The long duration and the recurrence of the epidemic indicate that the control measures which were instituted were inadequate.

INFLUENCE OF INJURY BY PROVED RABID ANIMALS OR BY STRAY ANIMALS ON MORTALITY

Three thousand two hundred and seventy-three, or 79 per cent of all the cases treated, were exposed through bites or lacerations (table 4). Of these, 1,580 were injured by a proved rabid animal and among these patients there were five deaths, a mortality of 0.31 per cent. One thousand six hundred and ninety-three persons were injured by stray animals in which rabies was suspected but could not be proved. Two patients in this group died of the disease, a mortality of 0.11 per cent. Only 873, or 21 per cent, of all the patients treated were exposed without direct injury. Of these, 693, or 16.7 per cent, were exposed to a proved rabid animal and 180 were exposed to a stray animal. Among the cases exposed without injury, there were many children in whom the history was suspected of being inaccurate, and some patients in whom the exposure was of such an intimate nature that treatment was deemed necessary. There were no fatalities among these patients. A total of seven deaths from rabies, a mortality of 0.16 per cent, occurred in the 4,146 cases receiving anti-rabies treatment.

TABLE 4

INFLUENCE OF INJURY ON MORTALITY FROM RABIES IN TREATED CASES

	Patients treated	Number deaths	Per cent
Exposed with injury to *proved* rabid animal	1,580	5	0.31
Exposed with injury to *unproved* rabid animal	1,693	2	0.11
Subtotal	3,273	7	0.21
Exposed without injury to *proved* rabid animal	693	0	0.00
Exposed without injury to *unproved* rabid animal	180	0	0.00
Subtotal	873	0	0.00
Total	4,146	7	0.16

All of the deaths in our survey occurred in individuals who were actually bitten by rabid animals. This agrees with the records from Alabama[5] where, during 17 years, injury by the teeth of rabid animals accounted for all of the deaths from rabies. The same findings prevailed in reports of rabies, with the possible exception of one case, during an 18 year period in Georgia.[8]

Fifty-four per cent of the treated patients were exposed to proved rabid animals. This indicates that there is a deep reservoir of rabies virus among the animals (chiefly dogs) in this community. The unproved rabid animals represent strays, usually dogs, in which it was impossible to secure the brain for examination. It is evident that rabies was present in considerable concentration in these animals, since two of the 1,693 patients injured by unproved rabid dogs died of rabies, a mortality of 0.11 per cent.

INFLUENCE OF LOCATION OF THE INJURY ON THE MORTALITY FROM RABIES

Injury to the head occurred in 354 patients, 8.5 per cent of the cases (table 5).

TABLE 5

INFLUENCE OF THE LOCATION OF THE INJURY ON THE MORTALITY FROM RABIES*

Location of injury	Patients treated		Number deaths		Per cent	
	C. H.	McK.[3]	C. H.	McK.[3]	C. H.	McK.[3]
Head	354	42,681	3	898	0.84	2.10
Arms	1,899	321,133	2	836	0.10	0.26
Trunk	111	31,012	0	33	0.00	0.10
Legs	1,264	351,636	2	584	0.15	0.16
Not stated	548	.....	0	.....	0.00	.....
Total	4,146	746,462	7	2,351	0.16	0.31

*Including all races.

Three deaths, a mortality of 0.54 per cent, occurred in this group.

Injury to an upper extremity occurred in 1,869 patients, 45.1 per cent of the cases. Two deaths, a mortality of 0.10 per cent, occurred in this group.

Injury to the trunk occurred in 111 patients, 2.7 per cent of the cases. There were no deaths in this group.

Injury to a lower extremity occurred in 1,264 patients, 30.5 per cent of the cases. Two deaths, or a mortality of 0.15 per cent, occurred in this group.

The location of the injury was not recorded in 548 patients, 13.2 per cent of the cases. No deaths occurred in this group.

These results are in general agreement with those reported by McKendrick.[3] In a tabulation of 746,462 treated individuals of all races, McKendrick[3] reported that in 42,681 patients in whom injury occurred to the head there were 898 deaths, a mortality of 2.10 per cent. In 321,133 patients in whom injury occurred to an upper extremity, there were 836 deaths, a mortality of 0.26 per cent. In 31,012 patients in whom injury occurred to the trunk, there were 33 deaths, a mortality of 0.10 per cent. In 351,636 patients in whom injury occurred to a lower extremity, there were 584 deaths, a mortality of 0.16 per cent.

The relative mortality among patients as regards location of the injury in our series agrees with that of McKendrick[3] on one main point, for example, that injuries to the head are attended with a much higher mortality rate from rabies than are injuries elsewhere. The remainder of our tabulation shows no significant difference in mortality rate among persons bitten elsewhere with the exception that no deaths occurred following injury to the trunk. Our mortality rates in patients injured elsewhere are probably not statistically significant for comparative purposes because of the small number of fatalities in each group. McKendrick's[3] review shows that injuries to an upper extremity are associated with a mortality rate which is approximately twice that following injury to the trunk or lower extremities. The significant fact, which is evident in both reviews, is that injuries to the head are attended with a much higher mortality rate than are injuries elsewhere.

INFLUENCE OF INTERPOSITION OF CLOTHING ON THE MORTALITY OF RABIES

Rabies virus was inoculated into the exposed skin in 3,242, or 78.2 per cent, of the patients treated (table 6). There were

TABLE 6

INFLUENCE OF INTERPOSITION OF CLOTHING ON MORTALITY FROM RABIES

Type of Exposure	Patients treated	Number deaths	Per cent
Bare skin	3,242	7	0.21
Through clothing	857	0	0.00
Not stated	47	0	0.00
Total	4,146	7	0.16

seven deaths, a total mortality of 0.21 per cent in this group. Eight hundred and fifty-seven were exposed with the interposition of clothing. No deaths were recorded among these patients. No statement relative to the presence or absence of clothing was made in 47 instances; no fatalities occurred in this group.

The interposition of clothing influences the incidence of rabies following the bite of a rabid animal to a considerable degree. The virus is introduced directly into the wound when the injury is inflicted to the exposed skin. Clothing serves to remove the saliva from the teeth of the animal and so prevents the introduction into the wound of an infecting dose, even though the skin may be broken.

INFLUENCE OF THE RACE ON THE MORTALITY OF RABIES

White patients comprised 3,441, or 83 per cent, of the patients receiving anti-rabic treatment (table 7). There were five

TABLE 7

INFLUENCE OF RACE ON MORTALITY FROM RABIES

	Patients treated		Number deaths		Per cent	
	C. H.	McK.[3]	C. H.	McK.[3]	C. H.	McK.[3]
White	3,441	.....	5	.....	0.14	.....
European	.....	553,505	..	854	.....	0.15
Colored	705	.....	2	.....	0.28	.....
Non-European	.....	476,285	..	2,659	.....	0.56
Total	4,146	1,029,790	7	3,513	0.16	0.34

deaths, a mortality of 0.14 per cent. Colored patients comprised 705, or 17 per cent, of the treated patients. There were two deaths, a mortality of 0.28 per cent.

These results are in general agreement with those of McKendrick.[3] In a tabulation of 1,011,790 treated individuals this author showed that among 553,505 Europeans there occurred 854 deaths, a mortality of 0.15 per cent; among 476,285 non-Europeans there were 2,659 deaths, a mortality of 0.56 per cent. These findings suggest that race has a bearing upon the mortality of rabies.

INFLUENCE OF INTERVAL BETWEEN EXPOSURE AND INSTITUTION OF ANTI-RABIC TREATMENT ON MORTALITY OF RABIES

Pasteur treatment was instituted in 2,620 patients, 63.2 per cent of the cases, within four days following exposure to rabies (table 8). Six deaths or a mortality of 0.22 per cent occurred in this group.

TABLE 8

INFLUENCE OF TIME INTERVAL BETWEEN EXPOSURE AND INSTITUTION OF ANTI-RABIES TREATMENT ON MORTALITY FROM RABIES*

Days	Patients treated		Number deaths		Per cent	
	C. H.	McK.[3]	C. H.	McK.[3]	C. H.	McK.[3]
0-4	2,620	502,761	6	1,520	0.22	0.30
5-7	817	154,707	0	371	0.00	0.23
8-14	536	98,006	0	231	0.00	0.23
Over 14	173	47,393	1(30 days)	259	0.57	0.54
Total	4,146	802,867	7	2,381	0.16	0.29

*Including all races.

Pasteur treatment was instituted within a period of five to seven days following exposure in 817 patients, 19.7 per cent of the cases. There were no deaths in this group.

Pasteur treatment was instituted within a period of eight to 14 days following exposure in 536 patients, 12.9 per cent of the cases. There were no deaths in this group.

Pasteur treatment was instituted more than 14 days following exposure in 173 patients, 4.2 per cent of the cases. One death, a mortality of 0.57 per cent, occurred in this group.

The results of our tabulation coincide with those of McKendrick[3] with the exception that no deaths occurred in the cases of our series where the institution of Pasteur treatment was begun between 5 and 14 days following the injury. This disparity may be based on the small number of fatalities in our series. These data suggest that delay in institution of Pasteur treatment to individuals of all races has no significant effect upon the mortality from rabies until more than two weeks have elapsed following which the mortality rate becomes more than doubled.

CONTROL OF RABIES

The control of rabies depends upon the control of the dog population. The systematic and vigorous destruction of stray dogs will eradicate the disease. The elimination of stray dogs, combined with the control of pet dogs, is the one and only effective control measure. All other measures are but adjuncts to this effective procedure.

SUMMARY

1. Four thousand, one hundred and forty-six patients received Pasteur treatment in the Pasteur Institute Clinic of Charity Hospital during the period from January 1, 1934, through October 31, 1943.

2. Of 3,003 animal brains submitted for examination, 1,003, or 43.3 per cent, were positive for rabies.

3. Stray dogs, which were unavailable for examination, were responsible for exposure to rabies in 45 per cent of the patients treated.

4. New Orleans experienced an epidemic of rabies beginning in the latter part of 1936 and continuing until the latter part of 1939.

5. The present epidemic began early in 1943 and has shown a higher human mortality than the previous epidemic.

6. Dogs were responsible for the exposure of 90 per cent of the patients treated and for all of the seven deaths from rabies.

7. Actual injury by a proved rabid animal increases the mortality rate.

8. Injuries about the face, head or neck are more dangerous than are injuries to other parts of the body.

9. Injuries through clothing are less dangerous than injuries inflicted through the bare skin.

10. The mortality from rabies is greater in negroes than in white patients.

11. Mortality from delay in instituting treatment is not significantly increased until two weeks following the injury.

12. Rabies can be controlled by controlling the dog population.

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CARE OF THE PREMATURE INFANT AT CHARITY HOSPITAL

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All infants born before the thirty-sixth week of gestation and weighing less than 2500 grams (5½ pounds) or measuring less than 48 cm. in length or unable to maintain normal body temperature when exposed to ordinary nursing conditions, usually require premature care. The purpose of this communication is to describe the nursing and medical care these premature infants receive at the Charity Hospital of New Orleans. The following factors will be considered.

I. Physical set-up.
II. Equipment.
III. Nursing personnel.
IV. Aseptic nursing technic.
V. Management of the premature infant.
VI. Investigation of home before discharge.
VII. Follow-up care after discharge.

I. PHYSICAL SET-UP

The premature unit is a separate nursery which isolates the immature infants from all other patients. The temperature of the rooms in the unit is maintained at 78-82° F. The nursery is divided into two sections with a separate personnel for each. One section is for uninfected "clean" premature infants who are admitted directly from the hospital delivery rooms. The other section is for isolation purposes and receives the following:

1. All babies born in sections of the hospital other than the delivery room, including babies born on stretchers and in the wards on the obstetrical floor.

2. All babies born outside the hospital.

3. All premature infants who become infected while in the "clean" section.

A wall and two flanking hallways separate these two sections. Overclothes and coats are hung on hooks in these hallways. Each section has a scrub room set up at the nursery entrance with gowns and masks available for all personnel entering the nursery. A dressing room, a utility room, and a formula room are located in each section.

Small rooms adjoining the main "clean" nursery are used as the observation quarters where infants not responding to routine care properly are isolated for 48 hours. The pediatrician, after examination and observation during this time, decides upon the proper disposition of the case:

1. Baby may be left in the "clean" nursery.

2. General isolation.

3. Complete isolation.

In like manner, the isolation unit is equipped with small rooms adjoining the main nursery. These rooms are used for complete isolation in which individual gown technic is carried out.

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II. EQUIPMENT

Some type of incubator or heated bed is necessary for adequate care. The price of incubators ranges from $15.00 to $500.00 and the choice of incubator depends largely upon the amount of money the institution feels justified in spending. However, premature care is not solved by the purchase of expensive incubators. It is far more advisable to have less expensive incubators and better nursing personnel than to have expensive incubators and too few nurses to operate them. A box affording protection of the infant from the environment and heated with a shielded electric light bulb will suffice. This should be so constructed that the infant can be cared for without removing it from the bed.

Other equipment needed are:

1. A gram scale which weighs accurately.
2. Individual bath basins which should be sterilized daily.
3. Individual thermometers to lessen cross infection.
4. Bassinettes in which the baby can be placed when incubators are no longer necessary.
5. Wall thermometers for checking room temperature.
6. Standard nursery equipment.
7. Diaper and linen hamper.
8. Running water with knee, foot, or elbow control, in every room—the more accessible the running water, the more apt it is to be used.
9. Plenty of soap and a sufficient number of paper towels.
10. Incubators and bassinettes should not be placed adjacent to each other. Sufficient space between them will prevent linen from one crib coming in contact with the baby or linen in the next bassinette.

III. NURSING PERSONNEL

It is important to remember that no setup, however good, will be effective unless there is a sufficient number of nurses. The shortage of nursing personnel is one important reason why newborn babies receive inadequate nursing care, and why there are epidemics of diarrhea, impetigo and other infections in nurseries. There should be a responsible graduate nurse in charge at all times.

There should be four graduate nurses especially trained for this work. This allows for a head nurse during the day, evening, and night. Te fourth graduate nurse would assist the day supervisor and relieve the evening and night supervisor on their days off duty. This insures graduate supervision in the nursery at all times.

The other help in the nursery are student nurses and nursery maids. The graduate nurse teaches and supervises those working with her. There should be at least one nurse to every four to six babies. We cannot expect one nurse to care for fifteen to twenty babies and use aseptic technic.

It is the nurse's responsibility to give special attention to each baby under her care and to report every pertinent finding to the pediatrician in charge. She should know the technic used, the emergency treatments, the methods used in maintenance of normal body temperature, the methods of feeding, and be able to recognize clinical symptoms and pathologic manifestations.

It is the supervisor's responsibility to establish a simple routine which can be carried out by everyone in the nursery. Procedures should be carried out in the designated method. In nurseries in which each graduate nurse attempts to carry out her own method, the result is usually a complete lack of technic and routine.

The supervisor or her assistant should see that all nurses are taught the procedures accurately. These should be demonstrated, and the demonstration returned under close supervision before the student or helper is allowed to do the work. Feeding, diapering, putting nipples on bottles, making beds, anything that the new nurse is to do should first be demonstrated. And it should be pointed out that the most minute detail in technic is important.

The nurse must be alert, observing, enthusiastic and above all "premature conscious" at all times. The routine must be carried out consistently during the entire

24 hours. At no time can there be any relaxing in good technic, nor in intelligent observation and efficient nursing care.

IV. ASEPTIC NURSING TECHNIC

Premature and immature infants are very susceptible to infection. Therefore, it is important to observe carefully the following factors:

1. Scrub hands and arms to the elbows on entering the nursery.
2. Wash hands with soap and running water:
   a. Between handling babies.
   b. After diapering.
   c. Before feeding.
   d. After using a handkerchief or adjusting a mask.
   e. After handling charts.
   f. After using the telephone.
   g. After moving screens or other equipment.
3. Feeding and diapering (two separate procedures). Have all soiled linen removed from nursery before feedings are brought into the room.
4. Have scale on rolling table and place it beside each infant's bed as needed. Drape scale properly, covering the sides and ends of platform.
5. Bathe each baby in its own bed.
6. Hold soiled or contaminated linen away from gown.
7. Drape treatment table for each baby.
8. Keep sterile containers securely covered at all times.
9. Keep forcep jars filled.
10. Hold baby, either on lap or in bed, while feeding and protect nipple from contamination.
11. Cover feedings when bringing them from formula room to nursery and during feeding period.
12. Nipple bottles as needed.
13. Place empty bottle and nipple in pan containing soap solution and water provided for such.
14. Keep all equipment from touching the floor as it is grossly contaminated at all times.
15. In bathing or handling the baby, care is taken to consider the upper part of the baby and bed as clean and the lower part contaminated. The nurse should not handle the upper part of the baby or bed after touching the lower part without first washing her hands.

A. MASK AND GOWN TECHNIC

Masks and gowns are worn at all times by doctors, nurses, helpers, and technicians while in the nursery. An adequate supply of gowns and masks is kept in the scrub room.

Gowns are to be changed as frequently as necessary; that is:

1. At the end of a work period.
2. After contamination by:
   a. Vomitus.
   b. Feces.
3. To go from Isolation to Clean Nursery.
4. At any time gown becomes contaminated.

Masks should be worn well up over the mouth and nose. They should be changed as soon as they become soiled or damp. Masks are totally ineffective with colds, so the individual with a cold should not go into the nursery. The central section of a mask is highly contaminated and should not be touched at any time. If it must be adjusted, grasp it by the ends, not the part over the nose and mouth, then wash hands.

B. THE HAIR

The hair is teeming with bacteria; therefore, the head should be covered with a cap of net or domestic. The hair should not be touched at any time while caring for a patient.

C. ISOLATION

At the first symptom of infection the infant should be placed in an observation room, and kept there until examined by the doctor. If advised, transfer infant to proper room and carry out routine technic for that particular condition.

V. MANAGEMENT OF THE PREMATURE INFANT

In order to conserve time and space the medical and nursing management of the premature infant is condensed to outline form.

A. Immediate care on admission:

1. Be prepared to receive baby.

2. Avoid chilling.

a. Wrap in pre-warmed pack made of sterile absorbent cotton and two layers of gauze, or

b. Place in pre-warmed bassinet with head dependent, or

c. Place in incubator at temperature of 98° F.

3. Trained nurse does the following:

a. Aspirate mucus.

b. CO_2 and O_2 inhalations every 30 minutes x 6.

c. Place under oxygen tent if indicated.

d. Administer vitamin K 1 mg. (H).

e. Administer 1 per cent $AgNO_3$ in eyes.

f. Observe cord for bleeding.

g. Record baby's temperature.

h. Weigh, if conditions permit (with clothing and later deduct).

4. Strict asepsis.

a. Sterile gowns, masks, equipment, scrubbing of hands.

B. Maintenance of body heat.

1. Keep infant's temperature as constant as possible (around 99° F.) with aid of incubator or warm water bottles, temperature of water bottles not to exceed 110° F. Remember, baby seldom survives if temperature is allowed to go down to 95° or lower.

2. Constant room temperature 78-82° F.

3. Regulate incubator temperature every two hours for first 24 hours, then every four hours subsequently. Adjust incubator temperature depending on infant's temperature.

4. Record rectal temperature of baby every four hours or oftener until stabilized.

5. Constant relative humidity, room at 55 per cent, incubator at 65 per cent.

6. Avoid drafts in nursery.

7. Continue premature care until infant's temperature is stable under ordinary room conditions.

C. Conservation of energy.

1. Do not bathe for first 10 days.

2. Handle as little as possible.

3. Feed small or weak infants by gavage to prevent exhaustion.

4. Do not remove from bed or incubator unless absolutely necessary.

D. Treatment of asphyxia. Administer in incubator.

1. Remove mucus from respiratory passages.

2. Dependent drainage of secretions and mucus.

3. Gradual increase of feeding depending on gastric capacity.

4. Administration of oxygen (100 per cent) or oxygen (95 per cent) + CO_2 5 per cent.

a. Funnel.

b. Catheter.

c. Tent.

d. E & J inhalator.

e. Intratracheal insufflation.

5. Artificial respiration. Exercise gentleness.

6. Mechanical resuscitation.

a. Drinker respirator of very little value.

b. E & J resuscitator safer.

E. Stimulation.

1. Irritation of afferent nerves.

a. Rub skin.

b. Gentle thumping of soles of feet.

c. Ether drops to feet.

2. Chemical.

a. Epinephine 1:1000 solution, M i (H) q. 1 hr. Increase dose and lengthen interval later.

b. Coramine, caffeine, alpha-lobeline M iii (H).

c. CO_2 (5- 10 per cent) in oxygen by inhalations.

3. Intramuscular whole blood, 10 c. c.

F. Intracranial hemorrhage.

1. Vitamin K—intramuscularly 1 mg. q. 2 hrs. x 6.

2. Whole blood (10-30 c. c.) intramuscularly or subcutaneously.

3. Avoid epinephine.

G. Prevention of respiratory and skin infections.

1. Permit no visitors in nursery.

2. Exclude all individuals with "colds" from nursery.

3. Personnel in attendance must wear sterile gown and mask and scrub hands before and after handling baby.

4. Remove infants with infection into septic room. Do not return them to clean nursery.

5. All prematures admitted from outside should be considered potentially infected.

6. In septic room, attendants should scrub hands, change gowns, and use separate equipment for each infant.

7. No bath or oil first ten days of life.

a. Wipe blood and meconium off with sterile water.

b. Clean buttocks only.

H. Prevention of diarrhea.

1. Aseptic technic.

2. Breast milk at all times if obtainable. If not, lactic acid milk is desirable.

3. Sterile formula, water, and equipment.

4. All diarrhea should be isolated.

5. Diarrhea is one of the most common causes of death in premature infants. Therefore, it is of utmost importance to check the amount, the color and the consistency of each stool throughout the 24 hours for each day. At the first abnormality noted, the infant should be starved and given only weak tea and water for a period of six to twelve hours during which time a stool culture is made. If the diarrhea is due to over-feeding, the stools will be normal by that time. If not, the pediatrician will then begin treatment.

6. A letter system is used in recording stools. They are recorded in the following order: (1) amount; (2) color; (3) consistency—thus: L.Y.S. for large yellow soft. (It is not necessary to chart "S" for stools). This saves time and space and tends to result in more stools being recorded than would be otherwise.

I. Weighing.

Weigh with clothes on. When changed, deduct weight of clothing.

J. Clothing.

It is imperative to remember that the preservation of body heat must be begun immediately after birth, in fact the baby should be received in a warm blanket and immediately transferred to the nursery.

1. Temporary clothes:

If the infant is under three pounds, do not dress, wrap in soft, warm blanket or cotton and place in heated bed or incubator.

2. Permanent clothes:

Bath packs are put up and sterilized for the morning care.

These packs include:

a. Diaper—folded rectangularly.

b. Shirt or short gown.

c. Foot wrapper.

d. Abdominal binders are kept in a sterile container in nursery. Keep infant covered lightly for warmth, but not sufficient to restrict movement of arms and legs.

K. Oxygen therapy.

Oxygen is, in the care of premature infants, as important as breast milk. The frequent need of oxygen therapy is the main reason why premature infants should be hospitalized. A supply of oxygen should be in every nursery so that it will be available for emergencies.

In the premature its use is indicated:

1. For all babies under 1500 grams of body weight.

2. For any baby where cyanosis is noted.

3. For any baby whose prematurity is either caused by toxemia or placenta praevia.

4. For pneumonia.

5. For cesarean section deliveries.

6. For asphyxia.

7. After a long difficult labor.

L. Method of feeding. Given without removing infant from incubator.

1. Small premature (2000 gm. or less). Use No. 10-12 French catheter.

a. Measure distance from bridge of nose to ensiform cartilage and mark this point with $AgNO_3$.

b. Moisten sterile catheter. Insert to $AgNO_3$ mark.

c. Note breathing. Milk air from tube, kink tube, pour milk slowly.

d. Support baby in semi-recumbent position.

e. Kink catheter and remove gently. Do not permit milk to escape from catheter when removing it.

f. Have mother express breasts every four hours and bring milk to hospital daily.

g. Put baby to breast when it can maintain normal temperature.

h. Artificial formula.

(1) ½ skimmed milk + 2 per cent casec + 5 per cent sugar, or

(2) Lactic acid milk:
Evaporated milk 400 c. c.
Water 400 c. c.
Sugar or Karo 4 tablespoonfuls.
Boil water, cool, then add 6 c. c. lactic acid.
Combine with milk.

2. Larger prematures (over 2000 grams)

a. Use medicine dropper with tip protected by soft rubber tubing or

b. Bottle with small rubber nipple.

c. If unable to feed by bottle or dropper use catheter method.

M. Guide for feeding premature infants.

No milk, water or sugar solution for 12 hours following birth.

Reduce feedings if they are accompanied by vomiting or cyanosis.

After two weeks, change feeding according to indications.

Give 50 mg. ascorbic acid twice daily, corrects inability to decarboxylate aromatic amino-acids beyond organic acid stage.

Vitamins A (2500 units) and D (400 units) concentrates added at two weeks.

Iron added at two and a half weeks. $FeSO_4$ or iron ammonium citrate 10 grains daily.

For maintenance need about 90 calories per Kg. daily.

For growth need about 125 calories per Kg. daily.

Need about 150 c. c. water per Kg. daily.

Lose 10-20 calories per Kg. through loss of fat in stool.

Rule:

1. Amount of milk to be fed per feeding = (age in days + 1) × wt. in lbs.

2. Amount of water to be fed per feeding = (age in days + 2) × wt. in lbs.

	Under 1250 G. or 2.75 lb.	1250 G. to 1500 G. or 2.75 lb. to 3.3 lb.	1500-2000 G. 3.3-4.4 lb.	2000 G. 4.4 lb.	Under 1250 G. or 2.75 lb.	1250 G. to 1500 G. or 2.75 lb. to 3.3 lb.	1500-2000 G. 3.3-4.4 lb.	Over 2000 G. 4.4 lb.
Age in hours or days	c.c. milk given each 3 hours				c. c. sterile water or 5% sugar in saline solution given every 3 hours.			
0-12 hr.	0	0	0	0	0	0	0	0
12-24 hrs.	0	0	0	0	5	10	15	20
2	5	10	15	20	7	12	18	24
3	6	11	17	23	9	14	20	26
4	7	12	19	26	12	18	25	30
5	8	14	21	29	15	22	30	30
6	Subsequent daily increase				Give every 3 hours between milk feedings. Increase amount as indicated.			
7								
8								
9								
10	1-2 c.c.	2 c.c.	2-3 c.c.	3-4 c.c.				
11					Begin to omit water or lactose feedings gradually.			
12								
13								

Feeding Guide

N. Breast milk.

Breast milk is the most desirable food for any newborn. Every effort is made to obtain it. As there is no breast milk station available, the supply is mainly from the maternity wards in the hospital, while the rest is obtained from the mothers who have gone home. Due to the fact that the breast milk is not collected under aseptic technic, it is necessary to boil it 3 minutes before using it. Since the breast milk supply is inadequate, the larger and stronger infants are started and maintained on an evaporated milk formula.

A sufficient number of nurses should always be in the nursery to feed the infants properly. All weak or small premature infants should be fed by gavage for the first three days and if the baby is very small it may be necessary to continue this method from six weeks to two months.

Small infants with a well developed sucking reflex may be fed by a small nipple—this nipple may be made by puncturing one hole in a medicine dropper top. This type of nipple should be used for all infants under four pounds. Then they may be fed by the ordinary nipple.

Gavage feedings are indicated under the following conditions:

1. Small prematures or those with poor sucking reflex.
2. A marked increase in cyanosis when the baby attempts to swallow.
3. Pneumonia.
4. Marked dehydration may necessitate gavaging the baby for a period of 24 to 48 hours.
5. Deformities of mouth or throat.

All prematures should be fed every three hours. Water or 5 per cent glucose in saline should always be given between feedings to prevent dehydration. Minimum feedings prevent diarrhea and to a large extent vomiting. Feedings should be given slowly, bubbling the infant two or three times during the course of feeding and again at the end of the feeding. If the baby vomits or takes its feeding poorly, half of its feeding should be given and the baby then allowed to rest 10 or 15 minutes. The remainder is then given or fed by gavage.

Larger prematures are supported on the nurse's lap with the head supported by the hand, facing the nurse. This prevents holding the infant against the nurse's gown, and it also allows closer observation for signs of cyanosis. To bubble the infant, merely roll it to the side and gently massage the back in an upward motion.

It is well to give CO_2 and O_2 inhalations to listless infants before feedings as a stimulant.

VI. INVESTIGATION OF HOME BEFORE DISCHARGE

A. A nurse from the nursery visits the mother in the obstetrical ward. She finds out the number of children in the family and whether previous children had been breast-fed. She attempts to win the confidence of the mother and encourages the mother to keep up her supply of breast milk until the baby can go home.

B. When the mother goes home she is brought to the nursery and is shown her baby. Again the nursery nurse tries to impress the mother with the importance of pumping her breast, and if possible, sending the breast milk to the hospital for the baby. (This milk is sterilized by the dietician before using.) She is then instructed to check on the baby's condition.

C. Within the first week after the baby is admitted to the nursery, the Department of Child Welfare is notified, and asked to check home conditions and the mother's ability to care for her baby. A public health nurse then visits the home and obtains the following information:

1. Number in family.
2. Number of rooms in house.
3. Type of heating.
4. Utensils for making formula.
5. Mother's ability to follow instructions.
6. Suggested date for discharge.

The nurse instructs the mother as to the clothes and equipment needed for the baby. If the home is clean and the mother intelligent enough to follow instructions, she is again instructed in the technic of breast expression and to send breast milk to the

Table 1

Premature Mortality Rate for 1941, 1942, 1943

B. W. in Grams	Total Admissions			No. Discharges			Died 1st 24 Hours			Died 24-48 Hours			Died After 48 Hours			No. in Nursery			Total Survived			Per cent Survived			Per cent Died		
	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943	1941	1942	1943
Less than 1000 grams	20	29	33			0	9	21	23	4	5		7	3	10	.....	.....	0	0	0	0	0	0	0	100	100	100
1001-1250 grams	17	18	14	3	2	1	5	8	6	1	2		8	6	6	.....	.....	1	3	2	2	17.6	11.1	14	82.4	88.9	86
1251-1500 grams	23	27	20	6	15	8	2	6	2	1	1	1	14	5	9	.....	.....	0	6	15	8	26	55.5	40	74	44.5	60
1501-2000 grams	55	96	104	28	77	61	4	14	9	2	2	4	21	3	29	.....	.....	1	28	77	62	50.9	80.3	59	49.1	19.7	41
2001-2500 grams	107	315	406	89	303	355		7	6			1	18	5	42	.....	.....	2	89	303	357	83.1	96.1	87	16.9	3.9	13
TOTAL	222	485	577	126	397	425	20	56	46	8	10	6	68	22	96	.....	.....	4	126	397	429	56.4	82.8	72.6	43.6	17.2	27.4

hospital. It is usually considered better to have the mother send breast milk to the hospital, although the home may be undesirable, since a breast fed baby would have a better chance for survival in an unclean home than would one on a carelessly prepared formula.

D. If the home conditions are satisfactory, the baby is then discharged at six pounds or thereabouts. If home conditions are unsatisfactory, the case is referred to Social Service and adjustments are made, if possible. Sometimes it is necessary to place an infant in a foster home if:

1. Tuberculosis exists in the home.
2. Extreme poverty.
3. Mother is not capable of caring for child.

E. At the time of discharge the mother is taught how to bathe, dress and feed the infant. She is given written and oral instructions for making the formula, or if baby is to be breast fed, she is allowed to feed the baby at least once before leaving the hospital. She is given a clinic appointment in two weeks, and instructed to bring the baby back to the hospital or consult a private physician immediately if it becomes ill, or manifests such symptoms as:

1. Vomiting.
2. Diarrhea.
3. Rash.
4. Loss of weight.
5. Upper respiratory infection.

F. Finally the mother is invited to bring the baby back to the nursery when she comes to the clinic. This pleases the mother, if she is at all interested, and it gives the nurses an opportunity to learn whether or not the baby is being cared for properly.

VII. HOME CARE

A. The day after leaving the hospital, a visiting nurse calls on the mother. Then weekly visits, or as indicated, are made.

B. Visiting nurse checks the following:

1. General condition of home.
2. Attitude of mother and father.
3. Room—cleanliness, proper heating, adequacy of isolation from other adults and children.

5. Examination of infant:
   a. Weight, temperature.
   b. State of nutrition.
   c. Character of respiration.
   d. Condition of mouth, skin, buttocks.
   e. Presence of anemia, icterus, etc.
6. Observe mother bathe and feed child.
   a. Check technic, temperature of bath water, soap used, etc.
   b. Perfect mother's technic of breast feeding, breast expression and preparation of formula.
7. See that mother gives child:
   a. Cod liver oil, two teaspoonfuls daily or concentrate 45 drops daily.
   b. Orange juice, two ounces daily or 50 mg. ascorbic acid.
   c. Iron—10 mg. daily.
9. Answer other questions which mother may desire to ask.

CONCLUSION

Since instituting a definite program for the care of the premature infant as outlined above, the premature mortality rate has dropped from 80 per cent in 1937 to 27 per cent in 1943. The mortality rate according to weight of these immature young infants for the past three years is tabulated below.

MARCH FRACTURE IN INDUSTRY

JAMES H. EDDY, JR., M. D.†
SHREVEPORT

In this war as in the last one there have been reported a large number of patients presenting the injury known as march fracture. While this fracture has been described since 1855, only recently has it received much publicity. This sudden interest stems from its relatively frequent occurrence among soldiers during intensive training. This is well brought out in recent papers by Bush,[1] Krause,[2] Flavell,[3] Moore and Bracher,[4] and Barns.[5] Its rare occurrence in civilian life accounts for its being so little discussed outside of military hospitals. Papers by Newell,[6] Stammers,[7] and Drummond[8] describing the occurrence of this injury in medical personnel are interesting and are not unlike the cases occurring here in that no long march was involved.

The discovery of three cases of this fracture among women employees of a shell loading plant during a period of only eighteen months prompted me to bring this injury to the attention of industrial physicians.

March fracture, or fatigue fracture of the metatarsal, is a term applied to fractures of the metatarsals occurring without direct trauma. Bohler[9] speaks of these as fractures due to indirect injury. The fracture usually develops at the end of a long march, or as in our cases, after work involving long hours of walking or standing on concrete floors. The second or third metatarsal is the bone most commonly affected.

The cause of these fractures is difficult to understand. Just why a foot that has borne weight throughout the individual's life should suddenly weaken and break is not clear. The theory of Brandt[10] as quoted by Krause[11] seems most reasonable. To use Krause's own words: "These fractrues are the result of rhythmically repeated, subthreshold mechanical insults, actilng by summation, to a point beyond the capacity of the bone to bear stress."

The patients seen here have all stated that while at work they noticed pain over the dorsum of the foot in the metatarsal region. There was no sudden acute pain but more of a gradual awareness of soreness in the foot. The pain was especially noticeable when bearing weight on the foot. In no case did the patient present herself for examination before several days after the onset of pain. Because no injury can be remembered, the patient expects the pain to disappear and goes about her duties until she becomes too uncomfortable to continue. As is brought out in most papers on march fraeture, all of these patients had been engaged in sedentary occupations prior to injury. Examination reveals considerable swelling over the dorsum of the foot with tenderness over the metatarsal region.

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There is acute tenderness over the site of fracture and pressure on the head of the involved bone causes pain. A patient presenting these findings should be suspected of having march fracture and x-ray study is indicated.

The x-ray appearance is characteristic and will vary according to the length of time that has elapsed since the onset of the condition. In the early stages a fine hair-line fracture will be seen, provided the x-ray technic is perfect. In order to show these fractures, the use of cardboard holders with no-screen film cannot be too strongly recommended. Fig. 1 shows a late first stage with early fuzzy callus just visible at the sides of the fracture line. After two to three weeks there may be some light callus formation about the site of fracture, through which the fracture line can be seen as is shown in fig. 2. The callus then gradually increases in density and the fracture line disappears. These lesions tend to produce rather abundant callus in spite of adequate immobilization. This is illustrated in fig. 3. The late appearance of the x-ray film is only that of thickened cortex.

Treatment consists of immobilization in a boot cast fitted with a walking iron. The cast is worn about six weeks and x-ray examination should show firm callus before the patient is allowed to walk on the foot. With a properly fitted cast these employees are able to continue their work.

Fig. 2

As is true in all injuries occurring at work, the question of compensability arises. In this type of case the problem is extremely difficult as it does not fulfill the requirements of an accident. In this state, however, the compensation act provides for the payment of compensation in all injuries received by an "Employee in performing serv-

Fig. 1

Fig. 3

ices arising out of and incidental to his employment." Under this interpretation of the law it has been advised that these cases be accepted under the compensation act.

CASE No. 1

Mrs. B. H., a 44 year old white housewife, came to the clinic on December 14, 1943 and stated that her left foot first became painful about two weeks previously and that the pain had gradually become worse. She had been employed as a munitions handler for several months prior to which she had done only house work. Her work required standing throughout an eight hour shift with the exception of about 15 minutes at lunch time. It was also necessary to walk about 500 yards to her work from the dressing rooms. The walk was repeated at lunch time. It was during one of these walks that she first noticed pain. Examination showed edema of the dorsum of the left foot with tenderness over the metatarsal area. The tenderness was acute over the lower end of the second metatarsal. Pressure on the head of this bone produced much pain. The x-ray film is shown in figure 1. She was treated by the application of a boot cast fitted with a walking iron and was able to get about fairly well. Her later course is illustrated in figures 2 and 3. She has had no further disability and is back at her old job.

CASE No. 2

Mrs. J. C., a 30 year old white woman who is the mother of four children, came to the clinic on June 18, 1943 and stated that eleven days previously she began having swelling and aching in her left foot. She had continued at work but the pain had become gradually more severe. This patient had been at work for about six months prior to which she had done only house work. Her work required long hours of walking and standing on concrete floors. Examination of the foot revealed edema of the dorsum that extended up to the ankle. There was some tenderness of most of the foot but this was severe over the middle of the third metatarsal. Pressure on the head of that bone caused much pain. X-ray revealed a fine fracture line in the third metatarsal that appeared incomplete. She was treated by immobilization in a boot cast fitted with a walking iron. Later x-ray studies showed the typical fusiform callus. She returned to her job and has had no other disability.

CASE No. 3

Miss R. H., a 23 year old white girl, reported to the hospital on June 15, 1943 complaining that she had had pain in her left foot for two days. On June 13 she had noticed that her left foot was swollen and was becoming increasingly painful. She had been at work for one year, during which time she was required to walk the greatest part of her eight hour shift. The floors of the building were concrete. Before working at this plant she had been a waitress in a cafeteria. Examination showed edema of the dorsum of the left foot with tenderness over the second metatarsal. X-ray showed a fine, incomplete fracture of the second metatarsal. A boot cast fitted with a walking iron was applied and the patient was able to be up and about. Later x-rays were similar to those shown in Case 1. She has had no further disability.

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FRACTURE OF THE PATELLA—ANALYSIS OF 150 CASES AT CHARITY HOSPITAL

LYON K. LOOMIS, M. D.†
NEW ORLEANS

ANATOMY

A proper understanding of patellar fractures is based upon a clear conception of the anatomy of the patella and its articulation with the femur.

The patella is a sesamoid bone which usually ossifies from one center and makes its appearance radiographically about the third or fourth year of life. It differs from other sesamoid bones by its large size and by its location on the angle of extension rather than the angle of flexion of the adjacent joint. As a projection of spongy bone in front of the femoral condyles, it protects the knee joint by serving as the first line of defense to trauma inflicted upon the anterior aspect of the knee.

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The patella glides upon the trochlear surfaces of the femoral condyles as the knee is flexed or extended and increases the pull of the quadriceps group on the tibia by increasing the angle of insertion of the patellar ligament. When the knee is straight, only the lower third of the patella articulates with the femur and in this position the patella can be moved from side to side. In acute flexion the opposite is true; the upper third of the patella is in contact with the femur and the patella is fixed or immobile. In semi-flexion the patella is most susceptible to fracture. In this position only the middle third of the patella is in contact with the femur, the upper and lower thirds being free.[2] The femur thus serves as a fulcrum over which the patella may be broken as one might break a stick of wood over the edge of a table.

INCIDENCE

A general study of 150 cases of fracture of the patella which were treated at Charity Hospital of Louisiana from 1933 to 1943 reveals a predominance of fracture in males as compared with females and a predominance in the white race as compared with the colored (table 1). Contrary to the common opinion that most fractures occur from indirect muscular violence, 92 per cent of the fractures in this series occurred from direct injury, and of this group 41 per cent were caused by the knee striking the dashboard in auto accidents. On the other hand, indirect violence accounted for only 8 per cent of the fractures. As for age distribution, no fractures occurred in patients under nine years of age or over ninety years of age, and the highest percentage of fractures occurred between thirty and forty years of age (fig. 1).

TABLE 1
INCIDENCE — 150 CASES

	Per cent
1. Sex	
a. Male	66
b. Female	34
2. Race	
a. White	71
b. Colored	29
3. Mechanism of injury	
a. Direct	92
(1) Fall	45
(2) Dashboard	41
(3) Miscellaneous	14
b. Indirect	8

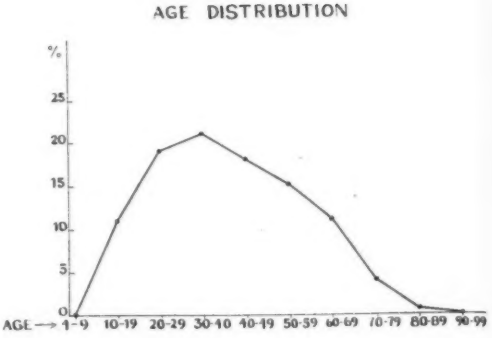

Fig. 1—Age distribution of 150 cases.

METHODS OF TREATMENT

A study of the methods of treatment discloses the fact that 29 per cent (43 cases) were treated conservatively with a high leg plaster cast only, while 71 per cent (107 cases) were treated by an open procedure (table 2). The most popular procedure was open reduction and internal fixation with iron wire. During the past five years patellectomy has been popularized and in this study 17 per cent of the cases were treated in this manner. During the past three years crochet cotton has been used as an internal fixative in cases where a smooth articular surface could be anticipated after open reduction. Ten per cent of the cases were fixed with this material (fig. 2). Sil-

TABLE 2
METHODS OF TREATMENT — 150 CASES

Conservative (high leg Plaster of Paris cast)—29% (43 cases)
Operative—71% (107 cases)

	Per cent
Iron wire	34
Unspecified type of wire	19
Patellectomy	17
Crochet cotton	10
Silver wire	5
Kangaroo tendon	3
Chromic catgut No. 3	3
Stainless steel wire	1
Unspecified material	4
Operative record lost	4

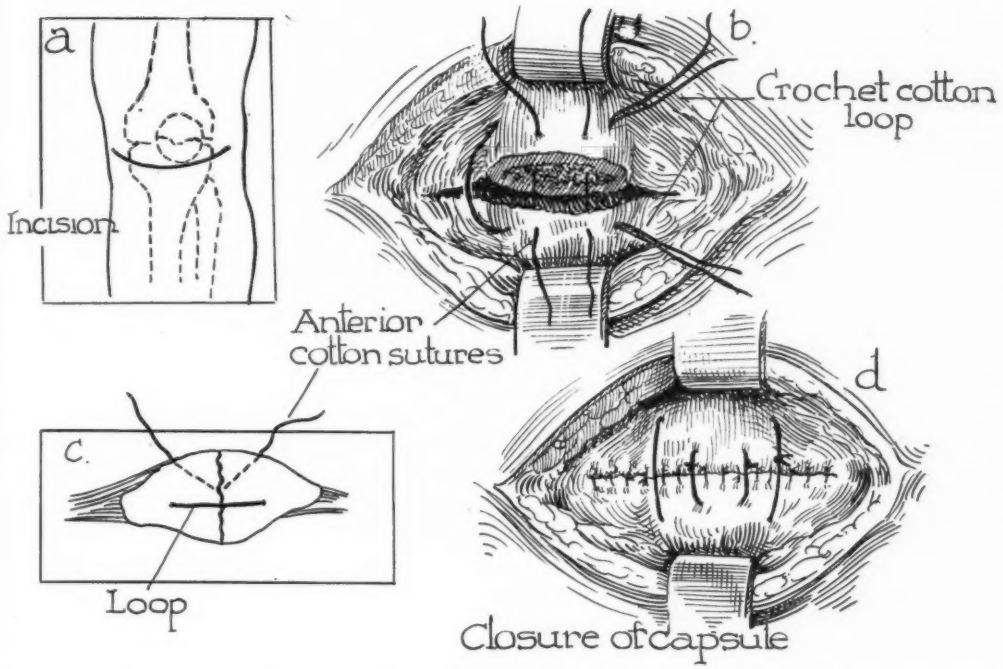

Fig. 2—A proper technic of repair is essential (reprinted by courtesy of Surgery, Vol. 15, No. 4, April, 1944). (a) Slightly curved transverse incision, (b) double strand No. 10 crochet cotton loop and two anterior sutures of crochet cotton, (c) sagittal section showing loop and anterior suture through patella. (d) Patella is repaired with crochet cotton and capsule closed with interrupted sutures of quilting cotton.

ver wire was used in 5 per cent of the cases. Less popular internal fixatives were kangaroo tendon, No. 3 chromic catgut and stainless steel wire.

COMPARISON OF MATERIALS COMMONLY USED

Stovepipe and florist wires are both iron alloy wires composed of ten different metallic elements (table 3). Stovepipe wire has a diameter of .0451 inches and has a tensile strength of 101 pounds. Florist wire has a diameter of .0268 inches and has a tensile strength of 41 pounds. As demonstrated by Venable and Stuck,[5] the number of metals composing an alloy increases its battery action or electrolysis. Such electrolysis is undesirable not only because it weakens the wire but also because disintegration of the wire increases tissue reaction. The value of a nonelectrolytic material was recognized by Böhler who advocated the use of heavy silk many years ago.[1]

TABLE 3
COMPARISON OF MATERIALS

Material	Size* (Diameter)	Tensile Strength	Composition
Stovepipe Wire	.0451	101 lbs.	Fe, Mn, Cr, Mg, Cu, Ca, Ti, Al, Zn, Si
Florist Wire	.0268	41 lbs.	Same
Silver Wire	.0181	7 lbs.	Ag, Mn, Fe, Mg, Cu, Ca, Pb, Sn, Zn, Si
Crochet Cotton #10	.0177	11.3 lbs.	Cellulose 91.00% H_2O 8.00 Wax .35 Pectic matter .53 Mineral matter .12

*Size expressed in inches.

The silver wire commonly used in fixation is composed of ten metals and has a diameter of .0181 inches and a tensile strength of only seven pounds. An added disadvantage of silver wire is that it stretches about one-third of its initial length before breaking.

The brand of crochet cotton used has a diameter of .0177 inches and a tensile strength of 11..3 pounds. It is 91 per cent cellulose, the remaining content being practically physiologic with the body.[4]

SUMMARY

As is frequently the case in a study involving many cases, it was impossible to get an adequate follow-up on all of the patients treated. However, 52 of the cases had sufficient follow-up to permit certain observations upon the different common open procedures (table 4).

TABLE 4
FOLLOW-UP OF 52 CASES—OPEN PROCEDURES

Method	No. of cases	Persistent pain	Quadriceps weakness	Limitation active extension	Infection	Breakage	Secondary operation for removal	No complaint
1. Iron Wire	22	14	18	5	36	14	41	18
2. Silver Wire	6		17			17	17	67
3. Crochet Cotton	8		13	13				75
4. Patellectomy	16	6	62	30	6			30

All numbers (except cases) expressed as per cent.

The cases fixed with iron alloy wire showed the highest percentage of pain, infection and subsequent removal. This substantiates again the work of Venable and Stuck[5] who emphasize the danger of using metals with a marked tendency to undergo electrolysis.

The cases fixed with silver wire showed the highest percentage of breakage. This could be anticipated in view of the low tensile strength of silver wire.

The cases repaired with crochet cotton[3] had the least amount of trouble. There were no infections and no secondary operation was necessary for removal of the cotton loop.

The cases subjected to patellectomy showed a high percentage of quadriceps weakness and 30 per cent of these cases had inability to extend the knee beyond 165 degrees extension.

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THE VALUE OF CENTRAL FIELD STUDIES OVER THE CONVENTIONAL TYPE OF VISUAL FIELD STUDIES*

SHELLEY R. GAINES, M. D.†
NEW ORLEANS

Since a visual field examination is entirely subjective, it is necessary to know whether or not the information is accurate. If the patient cannot be depended on for his answers, the effort may be time wasted. Before starting the screen examination, the patient's vision is tested; a careful examination with the ophthalmoscope is made and a confrontation field is quickly taken. Refractive errors are corrected if they are of importance. In the absence of gross temporal field defects, the blind spot is now outlined on the screen with a suitable test object usually 1½ to 3 mm. while at 1,000 mm. distance. If this can be satisfactorily done, the patient is cooperating. Sometimes when no gross hemianopia is present and in the absence of fundus pathology, patients give inconsistent answers about the blind spot—when this happens, the examiner now quickly tests for the presence of either a tubular or spiral field.

If such findings are demonstrated, the chances are that a functional problem is present. By these maneuvers on the tangent screen in the beginning, the examiner has tested the patient's reliability as a subject. If he proves to be a poor one, the examiner must use other methods than fields, to study his case.

It is impossible to do good tangent screen work without properly made test objects. Those mounted on small black wires with black cardboard handles sizes .6 mm., 1 mm., 1½ mm., 3 mm. and 5 mm. as designed by Dr. John M. Evans, have proved quite satisfactory.

In perimetry work, ophthalmologists probably take more visual fields on glaucoma patients than patients with any other

*Read before the sixty-fifth annual meeting of the Louisiana State Medical Society, New Orleans, April 24-26, 1944.

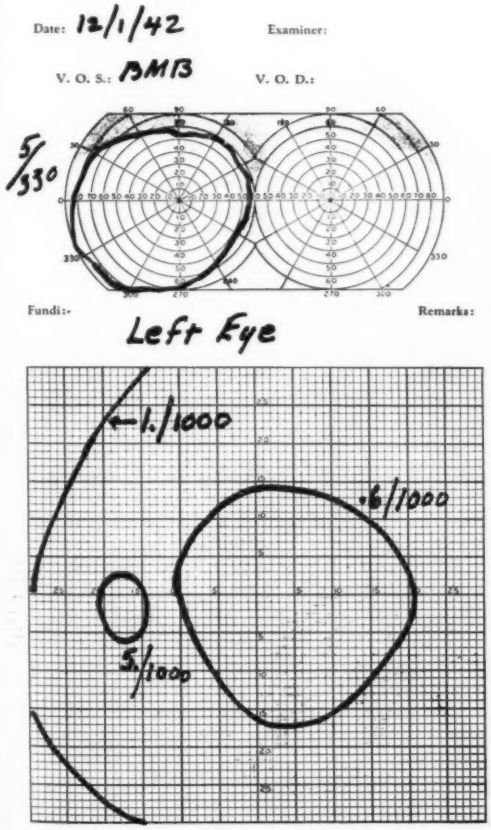
†From the Department of Ophthalmology, Tulane University School of Medicine.

one condition. In glaucoma, field changes show damage already done. It is therefore essential to find the earliest changes and watch their progress in order to treat the disease properly. These early changes are central. They are first seen with the 6 mm. at 1,000; 1 mm. at 1,000, and 1½ mm. at 1,000 isopters. When a big nasal step is found in the 5 mm. isopter at 330 mm. distance, considerable damage has already occurred.

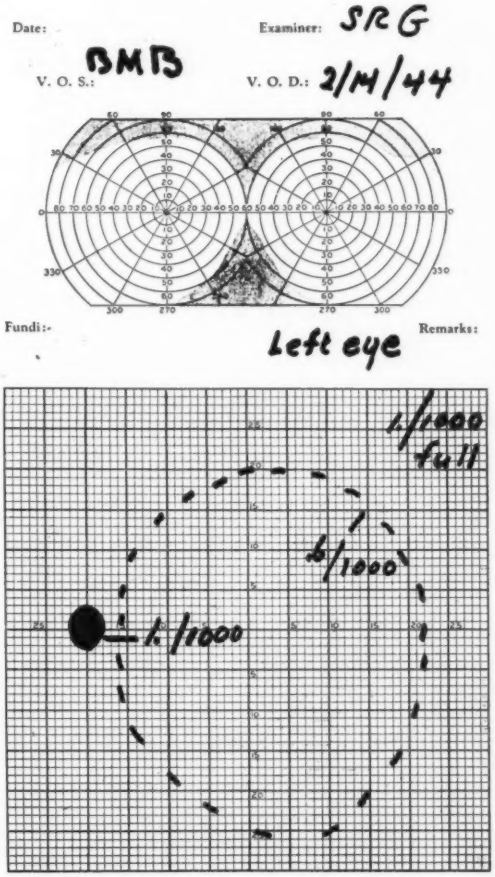
The following cases illustrate some advantages of central fields.

CASE No. 1

A 55-year-old male was first seen in December of 1942, his right eye had been blind for several years from glaucoma. The tension was 40 (Schiotz) the disk was cupped, and atrophied. The left eye had a corrected vision of 20/15. The tension was 26 (Schiotz). The peripheral field was normal for 5/330; but the central field showed a slight weakness in the temporal quadrant of the two central isopters. After the patient was put on pilocarpine the tension in his left eye came down to 18 (Schiotz) and has remained at that level. The left field has been checked every two or three months. On February 14, 1944, he had a normal central and peripheral field. Whether or not the weakness of the central isopters as shown on December 1, 1942, was due to early glaucoma, I cannot say. It is suspicious to say the least. This case is shown to illustrate a possible early change in the central field that is not shown at all on the peripheral field.



Case 1-A



Case 1-B

CASE No. 2

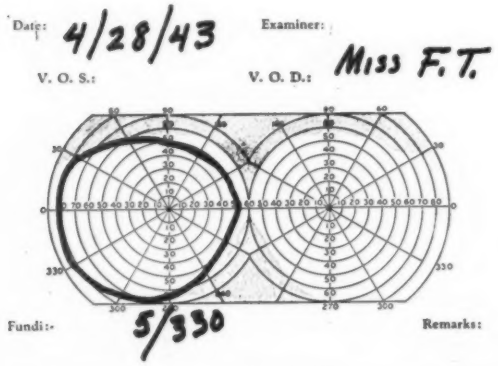
A 63-year-old woman whose vision in the left eye, when seen April 28, 1943, was 20/40 plus. Her tension was 28 (Schiotz). The peripheral field was normal. The central field, however, showed a definite constriction of the 1/1000 and the .6/1000 isopters. Fields were taken at intervals over a year's time. The 5/330 isopter remained the same. The two central isopters gradually shrank until on March 24, 1944, there was a nasal step in the .6/1000 isopter. The vision has remained the same. The central field definitely shows, however, that the glaucoma is not under control.

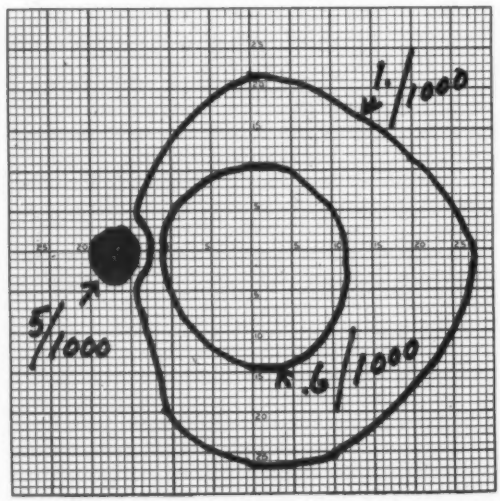
CASE No. 3

A 21-year-old man whose best corrected vision in his right eye was 20/15. The disk was cupped and his tension was 26 (Schiotz). The peripheral field showed a slight nasal cut. The central field showed definite glaucomatous changes a big Bjerrum scotomae above, a small one below, and a marked constriction of the .6/1000 isopter.

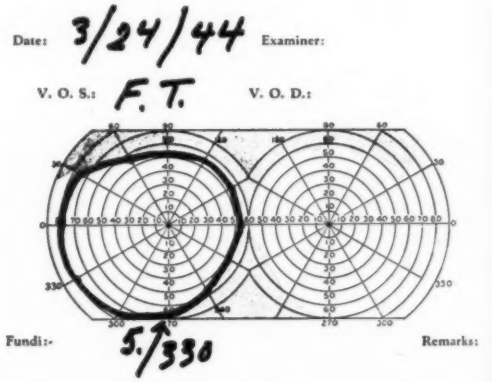
CASE No. 4

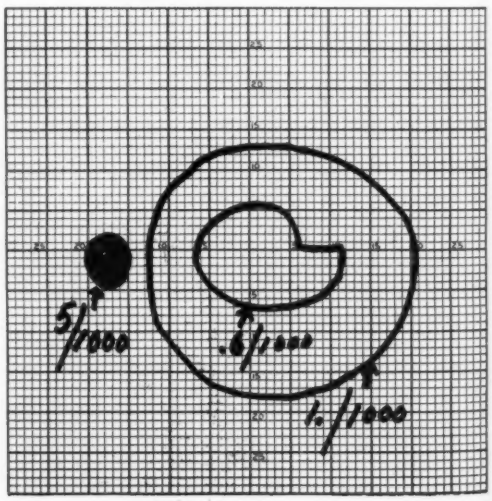
A 55-year-old man whose vision was 20/20, in the right eye was seen because he wanted his glasses changed. The tension was .22 (Schiotz). The disk showed beginning cupping. One half an hour after





Case 2-A





Case 2-B

euphthalmine 5 per cent was instilled in the right eye, the tension was 32 (Schiotz). The peripheral field showed a suspicious cut but the central field showed definite glaucomatous changes.

CASE No. 5

This case of an elderly woman is shown to demonstrate that although she has apparently a nasal hemianopia in the left eye, analysis of the central field shows a definite glaucomatous type of change with a fairly good central island of vision. Her vision was 20/25.

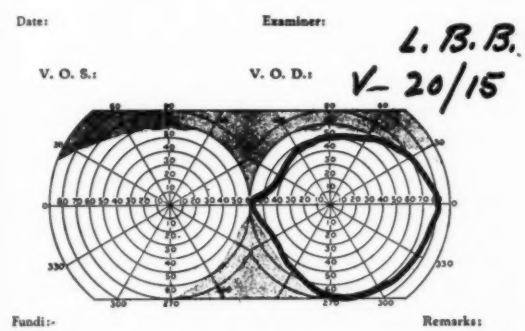
SUMMARY

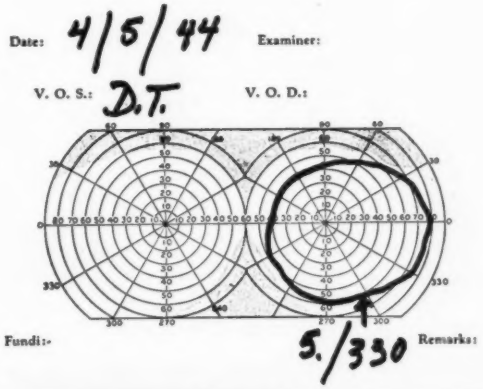
It is not possible in a limited time to cover the entire field of perimetry in glaucoma, but an attempt has been made to show the necessity of central field studies to find and follow early changes. To study perimetric findings on any case, we must take into consideration the central as well as the peripheral isopters, otherwise many early changes will be overlooked.

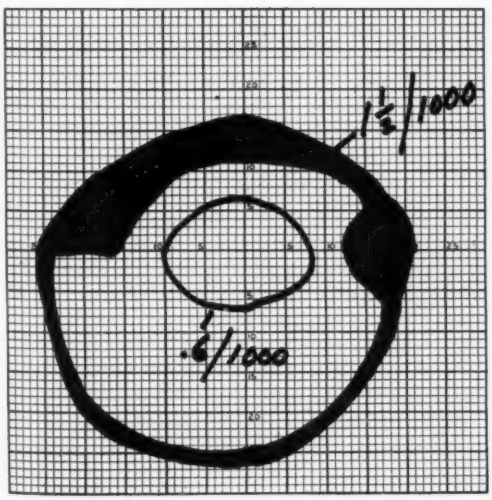
DISCUSSION

Dr. Gilbert C. Anderson (New Orleans): I should like to ask Dr. Gaines the specific application of this technic in surgical cases as they are the ones in which I and some of my friends are particularly interested. I have reference to bitemporal, homonymous and other field defects in tumors or abscesses. In such surgical conditions is there any advantage over the peripheral fields as ordinarily taken?

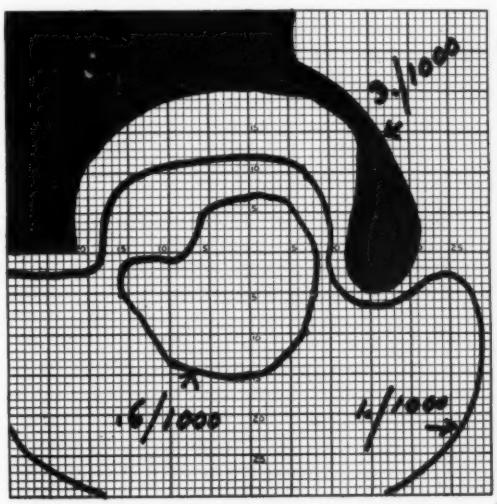
Dr. Shelly R. Gaines (In closing): I have never



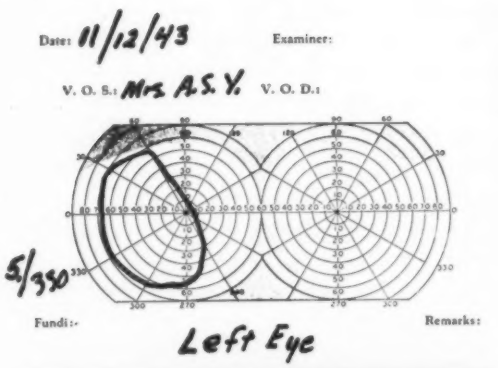




Case 3



Case 4



Case 5

seen a case of heminopia demonstrated on the tangent screen that did not show up on the peripheral isopters.

—o—

THE INCIDENCE OF THE SEVERAL ETIOLOGIC TYPES OF HEART DISEASE IN THE CHARITY HOSPITAL

J. H. MUSSER, M. D.†
and
C. S. DEMPSEY††
NEW ORLEANS

It may be of some interest to have a knowledge of the incidence of hypertensive, arteriosclerotic, syphilitic and rheumatic heart disease in the Charity Hospital of Louisiana at New Orleans. In order to obtain these figures the number of patients admitted with heart disease for the year 1942, the last year that complete summaries may be obtained, will be given. The age, sex and race of these persons may be seen in chart 1. There were 2,059 patients all told with the four most frequent types of heart disease: parenthetically there were 36 others who had miscellaneous cardiac diagnoses; congenital heart disease with 14 cases; functional heart disease with 13 instances, beriberi heart disease with five; hyperthyroid heart disease with four, and the heart of myxedema with one such diagnosis.

The number of patients who were diagnosed on leaving the hospital as having hypertensive heart disease is more than twice as many as of other three common etiologic types of diseases of the heart. There were 1,207 such patients discharged in 1942.

The next in frequency to hypertensive disease occurred arteriosclerotic disease with 505 cases. Needless to state the greater number of these patients were in the old age group.

It is surprising there were only 174 cases of syphilitic heart disease. Ninety-eight of these individuals were in mid-age group and only 76 had passed the age of 50.

The toll of rheumatic heart disease is well exemplified in figures obtained from the Record Room of Charity Hospital. In the group of patients under 20 years of age there were 67 patients discharged with a diagnosis of rheumatic heart disease; in the next three decades there were 88 and only 18 of the 173 patients lived to be over 50 years of age.

In the year 1942 there were 44,180 patients discharged from the hospital. The break down of these figures is shown in chart 2. It will be noted that all types of heart disease were seen more frequently proportionately in the colored than in the white race. It may be noted as well that hypertensive heart disease was in percent-

†From the Department of Medicine, Tulane University School of Medicine, and the Charity Hospital of Louisiana, New Orleans.

††From the Record Room of Charity Hospital of Louisiana, New Orleans.

CHART 1
NUMBER OF CASES OF CARDIAC DISEASE OF VARIOUS ETIOLOGIC TYPES ADMITTED TO NEW ORLEANS CHARITY HOSPITAL FOR THE YEAR 1942

	2 yr. - 20 yr.				21 yr. - 50 yr.				51 yr. - and up				
Types	WM	WF	CM	CF	WM	WF	CM	CF	WM	WF	CM	CF	Total
Hypertensive					30	28	48	96	195	273	261	276	1207
Arteriosclerotic					9	6	1	6	168	132	135	48	505
Luetic					3	1	62	32	14	3	50	9	174
Rheumatic	14	12	24	17	16	20	8	44	7	6	2	3	173

age more frequent in the white female than in the male of either sex, or in the colored female. Syphilitic heart disease occurred with a very much greater frequency in the negro than in the white individual, figures which are to be expected because of the much greater incidence of syphilis in the negro than in the white race.

CHART 2
TOTAL ADMISSIONS — 1942

WM	8,434
WF	9,389
CM	10,593
CF	15,764
	44,180

It is rather surprising that there were so many negro patients with rheumatic heart disease, as this type of heart disease is presumed to show a predilection for the white race. These figures confound this idea.

SUMMARY

A report is presented of the incidence of types of heart disease that occur in the Charity Hospital in a sample year. The figures for the year 1942 are presented and briefly discussed.

NEW ORLEANS
Medical and Surgical Journal

Established 1844

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1430 Tulane Avenue

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THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

THE PHYSICIANS' FORUM

The Bulletin of the Physicians' Forum, which is published by a small group of physicians who are advocating most vigorously the passage of the Wagner-Murray-Dingell Bill, contains on the last page a series of excerpts from letters written by five doctors scattered throughout the country, and one from the Council of Social Agencies of New Orleans. Most of the statements of the physicians are quite non-commital but the Journal would like to take violent exception to that one which has been signed "Council of Social Agencies, New Orleans, La." The statement that is published is as follows: "We are very grateful for the brochure which you sent us. It looks excellent and if it can be distributed widely it should go far in counteracting the obnoxious material that has been circulated on the other side." The last sentence in this statement is a very serious reflection on the medical profession in the City and the State which almost to a man is opposed to the pernicious Wagner-Murray-Dingell Bill. It is presumed that the material which is spoken of as obnoxious has to do with that which is being circulated by a very large group of physicians in this country. We would like to know why is this material obnoxious. Is it obnoxious to listen to or read what the other side has to say on any controversial subject? We would like very much to know who has the authority to write thus for the Council of Social Agencies, which in many ways is closely tied up with the medical profession. Has there ever been any expression of opinion from the Council as to whether this Council was in favor of or against the socialization of medicine? If an individual is responsible for this statement signed by the Council of Social Agencies, should not that individual sign his or her name rather than attempting to speak for the council as a whole?

The statement will leave a bad taste in the mouth of the physician who is opposed to the regimentation of medicine. This is particularly so because the impression will be left with the doctors throughout the country who read this avowal that it is made by a Council representing a large group of New Orleans citizens who, taking part in a debatable and controversial subject, is so narrow as to resent hearing what the other side has to say. The quotation leaves very distinctly and definitely the impression that representatives of New Orleans social agencies and the citizens of the City are opposed to that which is most dear to the heart of the physician, namely freedom to maintain the high ideals of the medical profession without supervision from a host of Washington bureaucrats.

OTHER THINGS FIRST

A provocative editorial appeared in a recent number of the New York State Journal of Medicine from which it might be well to quote one or two sentences and to paraphase others. The editorial writer notes "that medicine has progressed, developed, flourished under nearly every kind of Government which has had the common sense to let it alone. It has developed great leaders, good hospitals, it has conquered a great many of the world's greatest disease scourges. As a nation we are living longer, living healthier lives than almost any comparable group of people." This is a definite statement which cannot be disputed. What medicine has accomplished has been done in spite of the lagging behind of adequate housing, proper sanitation, good nutrition, favorable working conditions, all of which when neglected tend to promote illness and to impair the health of the poverty stricken.

The medical profession has kept the people of the country well; it is making them live longer than ever before and for practically every occasion where a doctor has been needed one has been available. Medicine has not promised innumerable panaceas but it has educated and trained good physicians and surgeons. That it has been successful may be shown statistically by the lowered death rate and incidence of disease in this country in a period of war and that in spite of fifty thousand members of the profession being in the armed forces. The health record of the Army and Navy, for which the civilian physicians are in good part responsible, has been remarkable. Never has a war been fought with less sickness and with less mortality from the trauma of shot and shell; 97 per cent of the injured in battle recover, thanks to the efficiency of the medical care given to the wounded soldier, sailor and marine.

Before advocating regimentation of medicine, should not the Government look primarily on improving the living conditions of the people as a whole? Why should not the Government have in the seats of the mighty a representative of the medical profession? There should be a position in the Cabinet for the head of a Department of Health, a physician, who would have control over the innumerable medical activities which are carried on by nearly every department of the Government. Such a Cabinet member should be one qualified to know about the problems of medicine in their broadest aspects and his department would be prepared to advise about, and to direct, the health activities of this great country.

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THIOURACIL IN THE TREATMENT OF THYROTOXICOSIS

Under the above caption, Williams and Clute,* of Boston, report on the largest series of patients treated with thiouracil that has appeared in current medical literature. These two observers, working in the Thorndike Memorial Laboratory and the Massachusetts Memorial Hospitals, have summarized the treatment of seventy-two patients who had thyrotoxicosis. The patients included those who had Graves' disease, toxic nodular goiter and toxic adenoma. The duration of illness extended from as short a time as three weeks to twenty-two years. Thirteen of these patients had previously had a subtotal thyroidectomy. All the patients were very carefully studied and have been followed for a sufficiently long time to warrant the conclusions that Williams and Clute have arrived at as a result of their observations on this form of treatment—thiouracil.

In the original group of patients the thiouracil was given in doses of one gram a day, subsequently this dose was cut down to 0.6-0.4 gram and eventually to a dosage of 0.2 gram daily after a period of six weeks. Because of the possibility of a granulocytopenia being brought about by the drug, blood counts were followed carefully,

*Williams, R. H., and Clute, H. M.: Thiouracil in the treatment of thyrotoxicosis, New England J. M., 230:657, 1944.

as well as the basal metabolic rate. The majority of the patients have been followed for a period of from four to six months, during which time practically all of these patients maintained a normal basal metabolic rate. The metabolic rate fell to normal in an average of within about five weeks in the more severe cases, whereas in the milder cases within a period of three weeks. If the drug was discontinued it was noted that the symptoms of thyrotoxicosis returned in a relatively short time. This does not imply, however, that the drug must be continued indefinitely. In some cases there can be no doubt but that there would be a permanent disappearance of symptoms after the patient has taken the drug for six months or a year. In other instances indubitably the drug may have to be taken for the lifetime of the patient, or until subtotal thyroidectomy is performed.

In the seventy-two patients who were studied by these two authors, one patient developed agranulocytosis but recovered in spite of continued therapy. Four patients developed a morbilliform rash which disappeared relatively promptly without discontinuation of the drug. Six of the patients developed edema of the legs, probably due to retention of sodium chloride and water as result of the treatment. Untoward reactions occurred in only thirteen of the seventy-two patients and in only three instances was it necessary to discontinue thiouracil.

Twenty-two of the patients were subjected to thyroidectomy for reasons other than an unsatisfactory response to the drug. The glands that were removed at operation showed a great variation, on chemical analysis, in the amount of drug present. There seemed to be no correlation in the amount of drug in the gland and the therapeutic response.

Thiouracil in the treatment of thyrotoxicosis opens up a new field of chemotherapeusis. The experiences of Williams and Clute and many other observers indicate that the basal metabolic rate can be brought to a normal level, can be maintained there and when held at this level there occurs clinical remission of the thyroid disease. The tachycardia, the nervousness, the diarrhea, the weight loss and other symptoms disappear. The ocular symptoms do not always disappear as happily as do the nervous and cardiac symptoms.

The use of thiouracil is fairly widespread throughout the country. There exists a difference of opinion among various observers who have employed thyrourea in hyperthyroidism. Some hold that the drug should be used only in the preoperative treatment of thyroid disease and that as soon as the patient is in good physical condition, the thyroid gland should be removed. Others believe that thiouracil may do away with operation on the thyroid gland completely. Probably a middle of the road position would be the best one to take; in patients with severe or relatively severe thyrotoxicosis, thyroidectomy should be done inasmuch as these people will never be free from symptoms unless the drug is continued all their life. In mild cases certainly it would seem to be well worth while to keep the patients on thiouracil for a considerable length of time with the hopes that ultimately the drug may be discontinued and the patient may make a complete recovery without having to undergo the vicissitudes of an operation.

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PHONES FOR THE SICK

President Val H. Fuchs has obtained a full statement from the Southern Bell Telephone Company relative to new phones for those people who are sick. This statement appears in the Louisiana section of the Journal. The form that is supplied to the applicant who wishes to install a telephone must be answered by the physician without any qualifications. Question number two for example must be categorically answered with a "yes." The president of the State Society also wishes it to be noted that there is a $10,000 penalty if the questions are answered improperly.

ORGANIZATION SECTION

The Executive Committee dedicates this page to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

RESPONSES OF SUCCESSFUL CANDIDATES IN THE RECENT PRIMARY TO PROPOSED LEGISLATION BEFORE THE CONGRESS

The following men were written to for their reactions in regard to various matters which involve medical legislation:

Candidates for United States Senator: Charles C. Gerth, New Orleans; Griffin T. Hawkins, Lake Charles; John H. Overton, Alexandria; E. A. Stephens, New Orleans.

Candidates for United States Congressmen: First District—Milton J. Burg, St. Bernard; J. Aubrey Gaiennie, New Orleans; F. Edward Hebert, New Orleans; Milton J. Montifue, New Orleans. Second District—William Dane, New Orleans; Allen H. Johness, Westwego; Paul H. Maloney, New Orleans; Alexander E. Rainold, New Orleans; James M. Thomson, New Orleans; Henry Vosbein, New Orleans. Third District—Robert F. DeRouen, New Iberia; James Domengeaux, Lafayette; Louis J. Michot, Lafayette; Robert L. Mouton, Lafayette; Albert O. Rappelet, Houma. Fourth District—Overton Brooks, Shreveport; George T. Shaw, Shreveport. Fifth District—Charles E. McKenzie, Monroe. Sixth District—Franz J. Baddock, Baton Rouge; H. Alva Brumfield, Baton Rouge; George M. Lester, Bains; James H. Morrison, Hammond; Murphy J. Sylvest, Hammond; Wilford L. Thompson, Baton Rouge. Seventh District—Henry D. Larcade, Jr., Opelousas; Paul C. Reed, Ville Platte. Eighth District—A. Leonard Allen, Winnfield.

Responses were received from the following stating that they were opposed to the Wagner-Murray-Dingell Bill and for the most part were opposed to failure to defer medical students. On the other hand they were in favor of House Bill No. 4663, which has to do with all medical matters being handled by a health department:

Messrs. Charles C. Gerth, New Orleans; Griffin T. Hawkins, Lake Charles; John H. Overton, Alexandria; E. A. Stephens, New Orleans; Milton J. Burg, St. Bernard; F. Edward Hebert, New Orleans; William Dane, New Orleans; Paul H. Maloney, New Orleans; Henry Vosbein, New Orleans; James Domengeaux, Lafayette; Louis J. Michot, Lafayette; George T. Shaw, Shreveport; George M. Lester, Bains; James H. Morrison, Hammond; Henry D. Larcade, Jr., Opelousas; A. Leonard Allen, Winnfield.

The letters of those Congressmen who won in the recent primary and who answered our letter are printed in full together with the letter of Congressman J. H. Morrison who is in the run off in the Sixth District:

UNITED STATES SENATE
Washington, D. C.

John H. Overton, Louisiana
Alexandria, Louisiana
August 21, 1944

Dr. Edwin L. Zander
Chairman, Committee on Maternal Welfare
La. State Medical Society
1430 Tulane Avenue
New Orleans, 13, Louisiana

Dear Dr. Zander:

Your letter of the 17th instant addressed to Senator Overton is acknowledged in his absence. As you probably know, Senator Overton received a call and felt it was his primary duty to return to Washington to be on hand at the time important postwar legislation was being framed.

The Senator has gone on record and has stated from time to time that he is opposed to socialized medicine and to the enactment of S. 1161, known as the Wagner-Murray-Dingell Bill.

For your further information I enclose herewith copy of radio speech delivered by the Senator on August 1 in which on pages 10 and 11 you will find his statement with regard to socialized medicine.

With respect to the other Bills mentioned in your letter, H.R. 5027, H.R. 5128 and H.R. 4663, as I recall these Bills have not been reported by the House of Representatives and therefore have not as yet come to the Senate for action.

I am sending your letter to Senator Overton in Washington for I am sure he will want to know

of the views of the Louisiana State Medical Society on these important measures.

Very truly yours,
(Signed) RUTH D. OVERTON,
Secretary.

CONGRESS OF THE UNITED STATES
House of Representatives
Washington, D. C.

F. Edward Hebert,
1st District Louisiana
Committees:
Naval Affairs
District of Columbia

August 26, 1944

Dr. Edwin L. Zander, Chairman
Committee on Maternal Welfare
Louisiana State Medical Society
1430 Tulane Avenue
New Orleans, 13, Louisiana

Dear Dr. Zander:

Replying to your circular letter of August 17th, I answer your questions as follows:

(1) I am opposed to the Wagner-Murray-Dingell Bill, socialized medicine.

(2) I am in favor of deferring medical students.

(3) I am in favor of all medical matters being handled by the Health Department, therefore, favor H.R. 4663.

Sincerely yours,
(Signed) F. EDW. HEBERT

CONGRESS OF THE UNITED STATES
House of Representatives
Washington, D. C.

Paul H. Maloney
2d District Louisiana
Member of the Committee
on Ways and Means

August 26, 1944

Dr. Edwin L. Zander, Chairman,
Committee on Maternal Welfare,
Louisiana State Medical Society,
1430 Tulane Avenue,
New Orleans, Louisiana.

Dear Dr. Zander:

Your letter relating to legislation that has been introduced in Congress, and asking my views in reference thereto, has been received.

In reply, I wish to say that the so-called Wagner-Murray-Dingell Bill is one that has many provisions—some of them I favor, while others I do not. In reference to the particular provision that you asked about, I am not in favor of this provision.

In regard to H.R. 5128, which supercedes H.R. 5027,I wish to say that this bill has been referred to the Military Affairs Committee with no action being scheduled, and pertains to the deferment of medical and dental students. It is quite likely that circumstances that are in the offing will preclude the need of this legislation.

As to H.R. 4643, this bill has been referred to the House Committee on Expenditures in the Executive Department and it also has not been scheduled for consideration—the provisions are to transfer certain health functions to the Department of Public Health. Such legislation would appear logical, however, I would like to have further information on the proposal.

Appreciating your views at all times, and always welcoming your suggestions, I am with best wishes

Sincerely yours,
(Signed) PAUL H. MALONEY

CONGRESS OF THE UNITED STATES
House of Depresentatives
Washington, D. C.

James Domengeaux
3d Cong. Dist. Louisiana
Committees:
Elections No. 1, Chairman
Insular Affairs
Irrigation and Reclamation
Merchant Marine and Fisheries
Mines and Mining
World War Veterans'
Legislation

Lafayette, La.,
September 14, 1944

Dr. Edwin L. Zander, Chairman
Committee on Maternal Welfare
La. State Medical Society
1430 Tulane Avenue
New Orleans 13, Louisiana

My dear Dr. Zander:

Your letter of August 17 was received, and I would have answered sooner but I have been so very busy in connection with my campaign for re-election to Congress.

I am not a Member of Congress at this time and will probably not be eligible to resume my seat until after the November election. However, I will be glad to keep in mind the legislation you referred to and give it every consideration if it is still pending action when I return to Congress.

With all good wishes, I am
Sincerely yours,
(Signed) JAMES DOMENGEAUX

CONGRESS OF THE UNITED STATES
House of Representatives
Washington, D. C.

James H. Morrison
6th District Louisiana

August 23, 1944

Dr. Edwin L. Zander
1430 Tulane Avenue
New Orleans 13, La.

Dear Dr. Zander:

I have your letter of August 17th asking me to state my position on several pieces of proposed

legislation. In this connection will state that I am unalterably opposed to legislation that will socialize the practice of medicine.

Regarding the deferment of medical students will state that I realize the medical profession is being called upon to contribute heavily to the war effort and undoubtedly is suffering proportionately in our war casualties with other professions. You may be sure that I favor adequate steps to assure having the needed number of physicians for the postwar period.

It is difficult to give a 100% commitment for or against a certain piece of legislation until it actually reaches the floor of the House for consideration, as very often amendments are adopted that entirely change the application of the act for what it was intended by its sponsor.

I am sure that I am in accord with principles with which the medical profession is working and which it seeks by the two pieces of legislation above referred to.

I am indeed glad to have your views regarding H.R. 4663 and assure you that this legislation will have my careful consideration when it reaches the floor of the House for consideration.

Sincerely yours,
(Signed) JAMES H. MORRISON M.C.

CONGRESS OF THE UNITED STATES
House of Representatives
Washington, D. C.

Henry D. Larcade, Jr.
7th District Louisiana
Committees:
Rivers and Harbors
Flood Control
Territories
Education
Pensions
Patents

August 21, 1944

Dr. Edwin L. Zander, Chairman
Committee on Maternal Welfare
Louisiana State Medical Society
1430 Tulane Avenue
New Orleans 13, Louisiana

Dear Dr. Zander:

Your letter to Congressman Larcade, dated August 17, has been received. The Congressman was called to Washington to vote on important legislation; however, it is expected that he will return here within a few days. At that time your letter will be called to his attention.

I can assure you that Congressman Larcade is always glad to have your views on matters of public interest, and he wants you to continue to feel free to advise him at any time.

Yours truly,
(Signed) RUBY DUGGAN,
Secretary to Congressman Larcade

CONGRESS OF THE UNITED STATES
House of Representatives
Washington, D C.

A. Leonard Allen
8th Dist. Louisiana
Committees:
Census, Chairman
Flood Control
Immigration and Naturalization
Elections No. 2
World War Veterans' Legislation
Pensions

August 25, 1944

Dr. Edwin L. Zander
1430 Tulane Avenue
New Orleans, Louisiana

Dear Dr. Zander:

I have your letter with reference to the Wagner-Murray-Dingell Bills, and also with reference to the Miller bills. On the question of socialized medicine, I have repeatedly stated my position verbally and in writing to numerous physicians in the 8th Congressional District. I have respect for the medical profession, and I want it to remain unbossed.

I have not had an opportunity to analyze the Miller bills, but I shall be happy to give those my most earnest consideration when and if they come before the House for action. The medical profession in the 8th Congressional District knows that on medical questions I have great respect for the opinion expressed by the profession.

Sincerely yours,
(Signed) H. LEONARD ALLEN,
Member of Congress

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR OF MEETINGS

October 2. Board of Directors, Orleans Parish Medical Society, 8 p. m.

October 3. Eye, Ear, Nose and Throat Staff, 8 p. m.

October 4. Mercy Hospital Staff, 8 p. m.

October 5. Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m.
Executive Committee, Baptist Hospital, 8 p. m.

October 9. Scientific Meeting, Orleans Parish Medical Society, 8 p. m.

October 11. Clinico-pathologic Conference, Chari-

ty Hospital Morgue Amphitheater, 1:30 p. m.
Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
Touro Infirmary Staff, 8 p. m.
Women's Auxiliary, Orleans Parish Medical Society, Orleans Club, 3 p. m.

October 16. Hotel Dieu Staff, 8 p. m.
October 17. Charity Hospital Medical Staff, 8 p. m.
October 18. Charity Hospital Surgical Staff, 8 p. m.
October 19. Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m.
October 20. I. C. R. R. Staff, 12:30 p. m.
October 24. Baptist Hospital Staff, 8 p. m.
October 25. Clinico-pathologic Conference, Charity Hospital Morgue Amphitheater, 1:30 p. m.
Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
French Hospital Staff, 8 p. m.
Catholic Physicians' Guild, 8 p. m.
October 26. Clinico-pathologic Conference, Touro Infirmary, 11:15 a. m.
DePaul Sanitarium Staff, 8 p. m.
October 27. New Orleans Hospital Dispensary for Women and Children Staff, 8 p. m.
October 30. Board of Directors, Orleans Parish Medical Society, 8 p. m.

NEWS ITEMS

Dr. B. Bernard Weinstein was recently elected to membership in the American Association for the Study of Sterility.

Dr. George E. Burch attended a meeting in Washington, called by the Office of the Air Surgeon, to discuss medical problems of altitude flying.

Dr. Sam Nelken has been appointed visiting lecturer in social psychiatry at Louisiana State University, these duties being in addition to his duties as clinical instructor on the faculty of the School of Medicine of the University.

Dr. Nathan Polmer attended the annual national convention of the American Congress of Physical Medicine in Cleveland.

Dr. Ralph V. Platou has been promoted from associate professor to professor of pediatrics in the Tulane University School of Medicine.

Lt. Col. Michael E. DeBakey, who has recently been advanced to that rank, read the citation from the War Department and presented E pins "for meritorious and distinguished service to the United States of America" when the New Orleans Red Cross Blood Donor Center was awarded the Army-Navy "E" for its "outstanding record in having procured approximately 75,000 pints of blood for the armed forces." Lt. Col. DeBakey is now attached to the Office of the Surgeon General in Washington.

Dr. Edwin L. Zander has been elected to the Board of Directors of the Louisiana League for the Hard of Hearing.

The Society had the misfortune of losing two of its active members, Dr. Hermann B. Gessner and Dr. R. S. Crichlow.

Daniel J. Murphy, M. D.,
Secretary.

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Wednesday of every month	Baton Rouge
Morehouse	Second Tuesday of every month	Bastrop
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

INFORMATION FOR PHYSICIANS AND SURGEONS IN LOUISIANA REGARDING TELEPHONE SERVICE FOR PATIENTS

In order that you may be better informed with reference to certain requirements of the War Production Board's Order placing restrictions on telephone service and the provisions made therein in the case of serious illness and certain other disabilities, we are quoting below excerpts from the WPB's instructions to physicians and surgeons as

shown on the certification Form WPB1-2101. Certain parts of the Form itself are reproduced with suggestions that may prove helpful.

EXCERPTS FROM W. P. B.'s INSTRUCTIONS

This order gives preference in obtaining service in two types of cases where it is properly certified that unreasonable hardship exists. Where telephone service is furnished as a result of such certification it means delaying the furnishing of service to a residential applicant whose application has been pending longer. The two types of cases are:

CASE 1

Residence service where the attending physician or surgeon certifies on the Schedule B Certification Form that *there exists a condition of serious illness or pregnancy involving serious complications, that he must be called repeatedly at unpredictable intervals for emergency treatment* and that in view of all the circumstances telephone service is essential. Such service shall be terminated within 30 days of the termination of the conditions specified above.

CASE 2

Residence service required where a person lives alone and the attending physician certifies on the Schedule B Certification Form that such person is confined to residence quarters for a protracted period by reason of serious illness or physical disability and that in view of all the circumstances telephone service is essential. The phrase "lives alone" includes a person who is alone all day or during the day or night working hours, except for one or more children aged 10 years or younger or another person similarly certified to be confined to residence quarters by reason of serious illness or physical disability. Such service shall be terminated within 30 days after the termination of the conditions specified above.

Information to be Supplied by Physicians or Surgeons on the Certificate Form

1. General nature of present illness or physical disability: State diagnosis in non-technical language, as far as possible. In pregnancy cases describe complications.

2. If Case 1, state whether the serious illness or pregnancy condition requires that the attending physician or surgeon be called repeatedly at unpredictable intervals for emergency treatment. If Case 2, state whether the serious illness or physical disability described above requires confinement of the patient to residence quarters for a protracted period.

3. State whether in view of all the circumstances telephone service is essential: Answer each question 2 and 3 "yes" or "no" based on the need for residence telephone service arising from the condition described in question 1 above.

4. Probable date of termination of physical condition set forth above: The answer to this question should be definite enough to enable the Telephone Company to know when the telephone would be subject to disconnection.

If you have had an occasion to execute this certificate for a patient you have no doubt observed reference there on to the United States criminal code which emphasizes the need for carefulness in the preparation of certificates so as to avoid any statement that might be interpreted as an intentional violation.

AMERICAN COLLEGE OF SURGEONS CANCELS 1944 CLINICAL CONGRESS

The American College of Surgeons, upon action of its Board of Regents, has cancelled its Annual Clinical Congress because of the acute war situation that has developed, involving greater demands than at any time in the past upon our transportation systems for the carrying of wounded military personnel, troops, and war materiel. The Congress was to have been held in Chicago, October 24 to 27.

Dr. Irvin Abell of Louisville, Chairman of the Board of Regents, in making the announcement, said that this action was taken after consultation with officials in Washington.

SALATICH HONORED

Captain M. A. Salatich, the son of Dr. P. B. Salatich, has been awarded the Bronze Star for "meritorious service in action from D-Day to the capture of Cherbourg." Captain Salatich has been in the service for a year after graduating from Louisiana State University Medical School and completing his internship.

NEWS ITEM

Dr. Vincent J. Derbes has recently been honored by election to membership in the American Academy of Allergy.

THE AMERICAN FEDERATION FOR CLINICAL RESEARCH

The regular meeting of the American Federation for Clinical Research was held on August 23, 1944, in the Hutchinson Memorial Building at 8:30 p. m. The program consisted of the following: Discussion of the Acute Diarrheal Diseases by Dr. James Watt; Electroencephalography by Dr. Walker Thompson; The Effect of Ouabain on the Electracardiogram by Drs. Richard Ashman, Leonard Apper and Edgar Hull; The Role of the Liver in the Metabolism of Paraldehyde by Philip Hitchcock.

ARMY DEATH RATE AT ALL-TIME LOW

The disease death rate among American soldiers of World War II is the lowest ever recorded for

the U. S. Army and only one-twentieth as high as that of World War I thanks to an effective program of military preventive medicine, Brig. Gen. James S. Simmons, chief, Preventive Medicine Service, U. S. Army, reported.

NEWS RELEASES FROM THE OFFICE OF THE SURGEON GENERAL

In the recent news releases there were two items of information concerning members of the State Medical Society:

Major M. E. DeBakey of the General Surgery Branch of the Surgery Division, Office of The Surgeon General, has recently been promoted to the rank of Lieut. Colonel. He has been on duty in the Office of The Surgeon General since January 29, 1943.

Lieutenant Colonel Roy H. Turner, M. C., Chief of the Communicable Disease Treatment Branch of the Medical Consultants Division, Office of The Surgeon General, has been on a tour of temporary duty in the field (Sept. 12 to Sept. 20). Colonel Turner visited the Vascular Center at DeWitt General Hospital, Auburn, Calif., and the Rheumatic Fever Centers at Torney General Hospital, Palm Springs, Calif., Bruns General Hospital, Santa Fe, N. M., and Foster General Hospital, Jackson, Miss. During the course of this trip, Colonel Turner represented the Surgeon General at the Regional Meeting of the American College of Physicians at Vancouver, British Columbia. He delivered two addresses; one on The Control of Streptococcus Infections with Sulfonamides and the other on The Hepatitis Problem in the Army.

An item of interest has to do with the reorganization of the office of the Surgeon General. This news release is as follows:

The post of Assistant Surgeon General, to be filled by Brigadier General Raymond W. Bliss, was created in a partial reorganization of the Surgeon General's Office it was announced on August 25. General Bliss will hold the new post in addition to his duties as Chief, Operations Service.

The Assistant Surgeon General will act for the Surgeon General in coordinating the work of the Operations Service, the various professional divisions, the Military Personnel Division and the activities of other divisions and services that affect operations.

Other organizational changes include dissolving of the Administrative Service, the Fiscal, Legal and Office Service Divisions of that service will report directly to the Executive Officer as previously; the Professional Service is dissolved and four Professional Consultant Divisions are created as follows: Medical, Surgical, Neuropsychiatric and Reconditioning; the Nursing Division is dissolved and all personnel and related aspects of the Army Nurse Corps will be the responsibility of the Army Nurse Branch of the Military Personnel Divisions, Personnel Service with over-all policy aspects of the Army Nurse Corps the responsibility of the newly constituted Nursing Division of the Professional Administrative Service.

POLIOMYELITIS

The peak of the 1944 epidemic of infantile paralysis for the nation as a whole apparently has been passed, and the incidence of the disease is now tapering off. The heaviest incidence of cases for the nation occurred in the week of September 2 when 1,683 cases were reported to the U. S. Public Health Service. The week of September 9 showed a drop to 1,487, and reports since then from epidemic states indicate the decline is continuing.

The total for the year up to September 9 was 10,959 cases, or more cases for the comparable period than at any time since America's worst epidemic year in 1916.

This year's total for the first 36 weeks is 2,030 cases higher than for the same period in 1931, which to date is the second highest epidemic year.

POSTGRADUATE COURSES OF THE AMERICAN COLLEGE OF PHYSICIANS

The American College of Physicians has arranged a series of postgraduate courses in various medical centers throughout the United States. The first of these courses is in cardiology and will be held October 2-7 at the Massachusetts General Hospital, Boston. Course II in general medicine will be conducted by the staff of the University of Oregon, Portland, October 9-14. In this same week the University of Minnesota Medical School, Minneapolis, will hold a course in internal medicine, during which time those who register for the course will be housed on the campus and will have their meals served in the dining room of the Center for Continuation Study Building. The week of October 16-21 there will be held a course in allergy at the Roosevelt Hospital, New York City, under the direction of Dr. Robert A. Cooke. Course V will be devoted to internal medicine and will last for two weeks. Various Chicago institutions are taking part in this course which will include many phases of medicine. The last course that has been announced is one that will be held in the specialties of medicine, including heart disease, arthritis, metabolic diseases, chemotherapy, gastroenterology, allergy and infectious diseases. This course is also for two weeks and will commence December 4. The participants in this course will be members of the faculty of the several medical schools in Philadelphia. The bulletin announcing these postgraduate courses and giving the details of the programs that have been arranged may be obtained from Mr. E. R. Loveland, executive secretary of the American College of Physicians, 4200 Pine St., Philadelphia 4, Pennsylvania. Attendance of

course is not limited to members of the College. No registration fee will be charged any medical officer of the armed forces of this country or of Canada.

INFECTIOUS DISEASES IN LOUISIANA

The Louisiana State Board of Health reported that during the week ending August 12 malaria led all other reportable diseases with 103 cases listed. Fifty-five of these cases were reported from East Carroll Parish and 30 from Jackson. The diseases occurring in numbers greater than 10 included 36 cases of bacillary dysentery, 25 of pulmonary tuberculosis, 16 of unclassified pneumonia, 11 of poliomyelitis, and 10 of mumps. For the week which closed August 19 there were listed 28 cases of pulmonary tuberculosis, 24 of malaria, 16 of unclassified pneumonia, 15 of typhus fever, and 11 of mumps. Four cases of poliomyelitis were reported this week. Typhus fever was reported from eight parishes scattered over the state. For the week which closed August 26 there were reported 42 cases of pulmonary tuberculosis, 20 of malaria, 13 of typhus fever, and 11 each of mumps and whooping cough. Only two cases of poliomyelitis were listed this particular week. The week ending September 2 was the particular week in which venereal diseases are reported for the preceding month. There were listed 1,558 cases of gonorrhea, 1,109 of syphilis, 29 of chancroid, and 16 of lymphopathia venereum. Of the other diseases there were 107 cases of unclassified pneumonia, 52 of pulmonary tuberculosis, and 26 of pneumococcic pneumonia. Of the venereal cases 639 gonorrhea patients, 81 of the syphilis patients, and 3 of the lymphopathia venereum were reported from military sources. Tuberculosis led all the reportable diseases for the week of September 9, at which time 32 cases were reported to the State Board of Health. In order of frequency this was followed by 30 cases of malaria, 14 each of typhoid fever and of unclassified pneumonia, and 12 of typhus fever, of which six were reported from Orleans Parish. The typhoid fever cases were scattered pretty widely throughout the state. There were four cases of poliomyelitis reported for this particular week.

HEALTH OF NEW ORLEANS

The Bureau of the Census, Department of Commerce, reported that for the week ending August 12 there were listed 126 deaths in the City of New Orleans divided 77 white, 49 colored, with 20 of the deaths occurring in children under one year of age, 16 white, 4 colored. For the week ending August 19 there were roughly the same number of deaths as the previous week. Eighty-six of these were in the white race, 45 in the colored, with 11 infant deaths. One hundred and thirty-nine deaths were recorded for the week ending August 26. Eighty-nine of these deaths were in the white population and 50 in the colored, with only 10 infant deaths. For the week which terminated September 2 the 145 deaths that took place in the City of New Orleans were divided 89 white, 56 colored, and 18 in infants, seven of whom were white and 11 were colored. For the week of September 9 there was a sharp decrease of the deaths in the city only 114 people expiring of whom 71 were white, 43 were colored, and 21 were infants, separated 11 white and 10 colored.

THEY DIED FOR THEIR COUNTRY

The following graduates of Tulane University School of Medicine have given their lives while in the service of their country. Their year of graduation, location and what they were doing prior to going into service have been stated after each name.

Josiah Dozier Bancroft, '31, was a surgeon in Birmingham, Alabama.

Raynor Elmore Holmes, Jr., '33, was located in Canon City, Colorado.

William A. Hutchinson, '24, was in general practice in Texarkana, Arkansas.

William I. Hunt, '42, of Greenville, Mississippi, was an intern at the Charity Hospital in New Orleans.

John Mitchell Johnson, Jr., '36, was in practice in Longview, Texas.

Felix Benjamin Long, Jr., '40, was in Washington, D. C.

Walter O. McCammon, '35, was serving a residency in Boston.

Gus W. Thomasson, Jr., '36, was located in Dallas, Texas, where he specialized in obstetrics and gynecology.

Harry Eugene Teasley, '28, was a surgeon practicing in Robinson, Illinois.

William Lee Tucker, '28, engaged in practice in Cullman, Alabama.

Z. B. Weingart, Jr., '42, was an intern at Charity Hospital.

DR. HERMANN B. GESSNER
(1872 - 1944)

Another past president of the Louisiana State Medical Society passed away on August 31.

Dr. Gessner was at one time, until his retirement on account of ill health, one of the outstanding surgeons of the City of New Orleans. He was for many years surgeon at the Charity Hospital and was professor of clinical surgery at Tulane School of Medicine. Likewise for many years he was a frequent contributor to medical literature, his publications being numerous and valuable.

Dr. Gessner was president of the Orleans Parish Medical Society in 1902 and the Louisiana State Medical Society in 1930-31. He held many positions of responsibility and trust in the State Medical Society, among which he was a member of the

Journal Committee. He was also a Fellow of the American College of Surgeons, a member of the Southern Surgical Association, the Southern Medical Association and of course the American Medical Association.

With the death of Dr. Gessner Louisiana loses one of its outstanding medical men who contributed much to the advancement of organized medicine. Dr. Gessner had a host of good friends; nobody could have been an enemy to this lovable, conscientious, and splendid surgeon.

DR. RICHARD S. CRICHLOW
(1882 - 1944)

A well known eye, ear, nose and throat specialist died September 6 in New Orleans. Dr. Crichlow resided in New Orleans since 1918. He was active in church and medical circles in the city. For twelve years he was in charge of the out-patient dispensary of the Veterans' Bureau. He was a lieutenant colonel in the Medical Reserve (inactive) and was on the staff of the Touro Infirmary.

DR. JOSEPH LEVY
(1880 - 1944)

Dr. Joseph Levy was born in 1880, and graduated from the School of Medicine of Tulane University in 1902. He died in New Orleans on July 8, 1944.

DR. WILLIAM HENRY PIPES
(1878 - 1944)

Dr. Pipes of Jackson, Louisiana, died on July 8, 1944. He was born in 1878 and graduated from the School of Medicine of Tulane University in 1906.

BOOK REVIEWS

The Management of Neurosyphilis: By Bernhard Dattner, M. D., Jur. D., New York, Grune & Stratton, 1944. Pp. 398. Price, $5.50.

Unique in its scope, this book presents the fruits of a distinguished career in investigating and treating neurosyphilis.

Since neurosyphilis is eminently a chronic disease, whose effects sometimes become apparent only in old age, it is important to ascertain whether the inflammatory process is still going on, smoldering beneath the surface or already arrested. *It is obviously not true as some physicians still believe that this question can be solved by a routine physical examination.*

After a systematic review of all methods of treating neurosyphilis the author states that, regarding fever therapy, the newer methods are certainly not overwhelmingly superior to their predecessors and cannot be considered as true substitutes for malaria treatment. He also says that no proper syphilis therapy can be undertaken without cognizance of spinal fluid findings.

For the further development of syphilis therapy Doctor Dattner urges the close cooperation of the general practitioner, the dermatologist, the internist, and the neurologist. The latter's great interest in such cooperation stems from the fact that he usually appears on the scene when the nervous system has already suffered irreparable damage and he is then confronted with an insoluble problem.

The entire subject of neurosyphilis is adequately and thoroughly covered in this splendid work which has been presented in a concise, interesting and comprehensive way. An excellent bibliography is included.

C. P. MAY, M. D.

Virus Diseases in Man, Animal and Plant: By Gustav Seifert. Transl. by Marion Lee Taylor, New York Philosophical Library. 1944. Pp. 332. Price, $5.00.

The publisher's notice and the author's preface both point out that the voluminous literature about viruses and virus diseases has increased rapidly, *especially within the past decade.* Dr. Seiffert states, "In the present work an attempt is made to give a survey of the momentary status of virus investigation *with special consideration of the most recent literature,* especially foreign" (italics those of the reviewer). This would be a most laudable project, since in the past five years our knowledge of many of the virus diseases has increased tremendously and in numerous instances fundamental data which were previously lacking have been supplied. There already exists several excellent surveys of various aspects of the virus diseases which review the literature comprehensively up to 1938, such as those of Doerr and Hallauer, in German (1938); Levaditi and Lépine, in French (1938); van Rooyen and Rhodes, in English (1940); Harvard School of Public Health Symposium on Virus and Rickettsial Diseases (1940). In addition to the foregoing, which are concerned primarily with human infections, there is a recent English summary (1943) of virus diseases in plants, by Bawden. The value of Dr. Seiffert's book would therefore rest primarily on the summarization of the pertinent literature up to 1943 or at least 1942. Actually there is not a single reference in the entire book to experimental work published after 1937. Since none of the references are to papers which appeared less than seven years ago and most of the references are considerably older, the book

has failed in its chief purpose, namely to bring the reader up to date in the knowledge of viruses.

In addition to the foregoing the book has many other serious faults, some of which may be mentioned.

1. The author defines viruses as agents "which apparently can only maintain themselves in close symbiosis with living cells" (p. 2), yet he discusses under the heading of "Virus-Like Organisms" the Bartonella and the agents of the pleuropneumonia group, which have been cultivated on artificial media in the absence of living cells. He also discusses, under the heading of "Certain and Questionable Virus Diseases of Man," scarlet fever and whooping cough which are now generally accepted as being bacterial in origin.

2. There are several contradictions of statement in the author's treatment of various virus diseases; e. g., in speaking of herpes simplex he states, "It is not quite certain that guinea pigs are subject to this infection" (p. 113). Yet later on the same page the inoculation of the plantar surface of the guinea pig foot is noted as a useful method of obtaining experimental infection. On p. 74 he states regarding the precipitation reaction in variola and vaccine, "Nothing more detailed is known about the nature of this reaction," yet proceeds in the following paragraphs to present data which throw much light upon the factors involved. Stanley's tobacco mosaic virus is referred to as exhibiting the properties of both albumin and of globulin, on one page (35).

3. There are important lapses due to the prolonged lag between the material covered and present-day knowledge, e. g., his statement (p. 79), indicating that effective immunization against virus diseases is only attainable with living virus. In the case of equine encephalomyelitis, it has been conclusively demonstrated for several years now that inactivated virus preparations will induce effective immunity if the quantity of antigen is sufficiently great. Again, in the case of St. Louis encephalitis it is stated, "An assumed transmission of mosquitoes could not be considered" (p. 226), whereas in actuality the mosquito has been clearly implicated as a vector.

4. From the bibliographical standpoint this book leaves much to be desired. a) There are frequent misspellings of the names of investigators to whose work reference is made (over 25 such errors were noted). b) The references have not been carefully checked. For example the only reference to a paper published after 1937 is an article by Wooley and Armstrong which is said (p. 227) to be in Public Health Reports for 1943. On checking, it appears that the paper actually appeared in 1934. A paper by Sabin is erroneously given (p. 102) as published in 1915 instead of 1935; a paper by Ledingham and McClean is given (p. 99) as appearing in volume 36 of the British Journal of Experimental Pathology, whereas this volume is not expected to appear in print for several years yet. The work of Aujesky on pseudo-rabies is given (p. 222) as dating from 1932 although the journal reference is dated 1902. c) The abbreviations for names of journals are sometimes handled in a careless fashion. The Journal of Pathology and Bacteriology is referred to as J. of Path. (p. 69 or as J. of Exper. Bact. (p. 97); the British Journal of Experimental Pathology is given as J. exper. Path. (p. 71); Public Health Reports is given as Publ. Health (p. 83); Canadian Journal of Public Health is given as Cand. Publ. Health J. (p. 146) or as Canad. Publ. Health (p. 103); Journal of Experimental Medicine is given as J. of exper. (p. 154). d) In the references, the volume number of the journal is sometimes omitted; sometimes no year of publication is given.

5. There is abundant evidence that the translator is unfamiliar with scientific English as well as the current terminology in the field of virus investigation. *Saline* solutions are referred to as "cooking salt" solutions (pp. 51 and 144); *dextrose* as "grape sugar"; *billion* is "milliard" (p. 142); virus *propagation* and *respiration* are given as "breeding" and "breathing" respectively (pp. 4 and 9); minced tissue becomes "pap of tissue" (p. 12); *agent* (of disease) is translated as "stimulus" (p. 1); virus *sediment* becomes "dregs" (p. 16); *antiserum* is "antitoxin" (p. 16); nasal *washings* become "lotions of the nose" (p. 154); egg *membrane* is "egg skin" (p. 20); *experimental animals* are "experiment animals" (p. 152); *whole blood* becomes "full blood" (p. 65); *bite of flies* is "sting of flies" (p. 64); size of a (microscopically) *resolvable* particle is "size of a soluble particle" (p. 25); *rabbits injected with* is "rabbits sprayed with" (p. 36). *Agglutinated* is given as "agglutinized" (p. 73); *Brownian movement* is "Brown's molecular movement" (p. 16); *bile* is "gall" (p. 108); *cell inclusions* are "cell inclosures" (p. 114); *nonmotile* rickettsiae are "immovable" p. 278); *strains* of virus are "stocks" (p. 147); *healthy* individuals are "sound" (p. 245); *latent* virus is translated as "slumbering" virus (p. 16); *intracerebrally injected* virus is "incorporated" virus (p. 61); *filtered* is "filtrated" (p. 281); *trench fever* is "rifle pit fever" (p. 279); *paralysis* is "lameness" (p. 203).

6. Many words are misspelled, e.g., antigenic (antigene p. 2); asterococcus (asterococcous p. 273); bronchitis (bronchites p. 1943); diphtheria (dipteria p. 109); ectromelia (ectromelie p. 134); endocrine (endoctrine p. 204); ganglion (gaglion p. 60); haematoxylin (haematoxilin p. 304); inoculate (innoculate p. 75); kaolin (caolin p. 31); lymphogranuloma inguinale (lymph granuloma inguinal p. 15); lapine (lapina p. 91); leptospira (leptospires p. 9); lysogenic (lysogen p. 297); murine (muriner p. 279); neurotropic (neurotrop p. 165, neurotrop p. 237); Pediculus (pediculous p. 130); pneumosintes (pneomosintes p. 144); prop-

erties (proprieties p. 37); ricinoleate (ricineolate p. 209); themselves (themelves p. 5; trocar (troicar p. 168); varioloid (variloid p. 119); viscerotome (viscerotrom p. 168).

7. It is surprising to find statements such as the following: "Viruses are not harmed by repeated freezing and thawing up to 185°C" (p. 49). "Ph. 7.4 is the most favorable number" (p. 97). "With this centrifuge from 55 up to 6000 revolutions are possible" (p. 41).

8. Aside from the above inaccuracies there are many evidences of ineptness in translation, e.g., "Granuloma of the lymphatic glands breeds deadly encephalitis in mice to a high degree after a few transmissions." (p. 52). "Lipschutz has priority in the matter of a name, who termed the group stronglyloplasma." (p. 17). "Cases of generalized vaccine after inoculation were indicated variously as a fermentation of vaccine in variola." (p. 98). "The antigene structure is as good as not worked on at all." (p. 74). "But the sickness of their inoculation leads to secretion of virus, it can easily be protracted in uninoculated stocks." (p. 110). "For the correctness of this view speak the experiments of Galloway, etc." (p. 75). "With very slight addition of formalin, virus is heated so long until it is apathogene." (p. 127). "In the Porto Rico stock which is infectious for mice in a dilution of 1:1 million, it might concern a virus very malignant for mice." (p. 147). "For this reason the protection inoculation of a fellow fever very effective in itself with neurostrop virus alone, is not to be recommended for general intromission, preferably on the other hand one with tissue cultures from chicken embryos with brains removed." (p. 78). "For concentrating the virus by means of filtration membrane filters are used in the first rank." (p. 40). "Their content of fatty substances is remarkable, which can be stained with osmic acid —". (p. 109). "They obtained fever and exanthem with wash water of the throat from earlier stages of the disease, filtered and unfiltered, in monkeys, even if irregular, and further transference in transmissions also succeeded." p. 136).

9. The following is a partial list of the investigators whose names have been misspelled, with the errors and the pages on which they occur noted in parentheses: Barnard (Bernard p. 305); Bengtson (Bengston p. 232); Blanc (Blane p. 173); Borna (Barna p. 22); Conor (Connor p. 282); Corey (Corcy p. 36); Findlay (Findley p. 110); Hass (Han p. 22); Hornus (Hormus p. 203); Hoyle (Woyle p. 151); Kligler (Kliger p. 7); Kodama (Kodannas p. 21); Kuttner (Huttner p. 197); Laidlaw (Laidlow p. 161); Merrill (Merril p. 237); Mueller (Miller p. 94); Olitsky (Olitzky p. 238); Perdrau (Perdreau p. 59, Perdrean p. 227); Petrie (Petze p. 34); Pirquet (Pirquets p. 165); Saddington (Seddington, Seddingtom p. 112); Sauton (Sayton p. 295); Schwentker (Schwendtker p. 158); Siler (Siller p. 172); Stokes (Stoke p. 27); Trager (Trages p. 260); Tulloch (Pulloch p. 74).

In summary, then, it may be said that this volume suffers grievously from numerous errors of omission and commission. It would seem to this reviewer that the reputations of author, translator and publisher would be served best by withdrawing this book from the market until it has been subjected to a complete revision.

MORRIS F. SHAFFER, D. Phil.

Psychology of Women: By Helene Deutsch, M. D. New York, Grune & Stratton, 1944. Pp. 399. Price $4.50.

This book is a psychoanalytic interpretation of the normal psychic life of women and their normal conflicts. It is the first of two volumes and deals with the individual development and personality of woman. The second volume will deal with her role as a servant of the species.

The author brings out in her observations that the understanding of individual psychology and normal biology of woman is essential to the correct understanding of situational and cultural factors in a woman's life. Furthermore it appears that social changes for the emancipation of women and other moves to improve environment fail if they deprive women of their natural role and responsibilities and feminine satisfactions. "In the Middle Ages, when women were most subjected socially, chivalrous love and the knight's humble service of his lady were most widespread."

Passivity as well as suffering for the sake of love are normal feminine characteristics too often belittled, renounced and struggled against with disastrous results. The various attributes of the normal feminine erotic women are discussed in complex detail. The book develops the growth of these characteristics step by step from the girl-child to the adult woman.

One of the best contributions of this book is the presentation of the relationship of the girl to her mother. This relationship is particularly critical in the prepuberty period of between 10 and 12 years. The normal drive to grow up and achieve something is strong at this time when the girl is preparing herself to meet adults with as much knowledge and training as possible before she must take on the special role of womanhood. At this period sexuality has less reality than at any other time. The ego development is at its height. The young girl, striving for independence, becomes extremely critical of her parents and particularly of her mother. She tries to copy screen stars and heroines of books instead of patterning after her mother. For the mother now represents infantile dependency which the girl is trying to renounce. She imitates other adults. The girl's play acting may cause her to be continually meddling in the affairs of grown people often making a nuisance of herself and acting like a hypomaniac. She keeps

her secrets from her mother and confides only with girls her own age. If the mother cannot respect the girl's independence, there will be difficulties. The attempt to tear herself away from her mother's influence frequently brings on an intensified anxious urge to remain under the maternal protection with a "passive clinging and a querulous demand for love that is difficult to satisfy". "In the prepuberty of girls attachment to the mother represents a greater danger than attachment to the father—the condition of 'psychic infantilism' found in many adult women represents the outcome of an unresolved attachment to the mother during prepuberty." If the girl's conflict is not made worse by the motherliness of the mother she will return during puberty and throughout adult life to a harmonious relationship with the mother, who remains an ideal and friend in times of stress. The author quotes from D. H. Laurence: "My son is my son till he takes him a wife. My daughter's my daughter the rest of her life."

WALKER THOMPSON, M. D.

Female Endocrinology: By Jacob Hoffman, A. B., M. D. Philadelphia, W. B. Saunders Co. 1944. Pp. 788. Price, $10.00.

This book is well written and easy to read. It has many illustrations, which are capably selected and highly instructive. This is one of the best and most useful text books on endocrinology and should be a must on the list of every gynecologist and those interested in endocrine therapy and disorders.

The author has clearly and concisely covered the field of the clinical aspects of reproductive and gonadal endocrinology, and has also included a discussion of glandular physiology in general. The clinical material is conservatively and critically handled. Animal experimentation is included, but is clearly defined as being experimentation, and the large jump between animal experimentation and clinical application is clearly indicated. The section on laboratory tests and diagnostic age is of considerable value, and it is indeed useful to have them available in a well organized and presented form.

There is an exhaustive and critical review of the literature on endocrinology, and an extensive bibliography is added to each chapter. In addition there is an extremely valuable concluding bibliographic index.

This book is recommended without reservation to those interested in the field of gynecologic endocrinology and endocrinology in general.

B. B. WEINSTEIN, M. D.

Jews in Medicine: By Harry Friedenwald, M. D. Baltimore, Johns Hopkins Press. 1944. 2 Vols. Price, $3.75 each.

This two volume work, the "Jews in Medicine" contains a number of well written and carefully planned essays by a student and a scholar, who is at the same time a very fine physician. This represents a labor of love. As Dr. Sigerist points out in the preface, Dr. Harry Friedenwald is an unusual personage in medicine. He is one of those ardent book collectors, who in Baltimore, centered around William Osler, Howard Kelly, William Halstead and Henry Barton Jacobs. Friedenwald not only collected books pertaining to the history of Jews in medicine, but read and studied them. As a result of his years of arduous study he has been able to present a considerable amount of new material, well organized and carefully thought over, covering many of the fields of endeavor of the Jews in medicine, which were previously relatively unknown.

These two volumes contain a large number of essays of Dr. Friedenwald, which were previously published elsewhere, and several new ones which are published here for the first time. The entire book makes informative and pleasurable reading, and throws a highlight on an aspect of a History of Medicine, which has previously been not too well illumined. Volume I contains an introductory essay about Jewish Book Lovers, which is quite interesting. It then contains a group of essays on the practice of Medicine among the Jews. A group of essays on ancient and medieval Jewish Physicians, and a group on Jews in the early Universities, and concludes with a group of biographical sketches, including those of Jacob Vahalon, Francisco Lopez D. de Villalobos, The Doctors da Veiga, Abraham Zacutus, Ludovicus, Mercatus, Lusitanus, and concludes with an essay on some Jewish interests of a Marrano Physician.

Volume II includes a large number of extremely interesting essays, including one on two Jewish physicians of the 16th Century; a description of a 16th Century Consultation of Doctors, Medical pioneers in the East Indies, some notes on the history of Jewish Hospitals, an interesting essay concerning diseases of the Jews, and some ophthalmological notes of Jewish interest. There is then an interesting group of chronicles of Jewish physicians in Italy, and in Spain and Portugal, and South Eastern France. There is an excellent group of references including many, which are found solely in the author's library, and a very well worked out index.

It is not often that I have an opportunity to review a book of the general excellence of this work of Friedenwald. It is recommended unhesitatingly to those who have an interest in the history of medicine.

B. BERNARD WEINSTEIN, M. D.

Industrial Ophthalmology: By Hedwig S. Kuhn, M. D. St. Louis, C. V. Mosby Co. 1944. Pp. 294. Price, $6.50.

This interesting volume of three hundred pages is reasonably well organized and written. In the first section, the visual aspects of job analysis are

explained and numerous visual tests and technics are detailed. Then follows an explanation of existing relationships of visual acuity, stereopsis, muscle balance and color perception to numerous jobs in many industries. A very well written section on industrial eye injuries by Dr. Albert Snell is then presented. The last chapters are devoted to eye protection and recent ophthalmic problems in industry. The illustrations which number about one hundred and twenty-five are excellent, including photographs, sketches and graphs which add greatly to the text. Especially in the postwar period and in less highly industrialized sections, this volume will serve a very useful purpose. In Louisiana, for example, relatively few plants conduct visual surveys such as those suggested by the author, largely because of the cost involved and the fact that the importance of industrial ophthalmology is not yet understood.

CHAS. A. BAHN, M. D.

Diseases of the Eye: By Charles H. May, M. D. 18th Ed. Baltimore, Wm. Wood & Co., 1943. Illus. pl. fig. Price, $4.00.

The present edition which appeared shortly before the author's death is a fitting tribute to his memory. This little classic has passed through 62 editions in 11 languages and during its 42 years of existence has served more physicians than any book ever written on ophthalmology. Several factors have contributed to its great success. It appeared at the end of the quiz-compend era, presents only the clinically important and useful, the material is arranged in an exceptionally orderly manner and is presented in an unusually simple, clear style, and frequent revisions have kept it up to date.

In the present edition, the chapters on Lacrimal Diseases and Errors of Refraction have been rewritten, and those on Compensation Standards and Military Requirements have been revised.

Several discrepancies in regard to current ophthalmological thoughts exist. Future authors should consider the advisability of enlarging the table of contents to facilitate the finding of desired information and modernizing several illustrations such as those of test frames and case.

CHAS. A. BAHN, M. D.

PUBLICATIONS RECEIVED

Lea & Febiger, Philadelphia: Diseases of the Digestive System, edited by Sidney A. Portis, B. S., M. D., F. A. C. P.

The Williams & Wilkins Company, Baltimore: Malaria: Its Diagnosis, Treatment and Prophylaxis, by William N. Bispham, Colonel, U. S. Army, M. C., retired. Plaster of Paris Technic, by Edwin O. Geckeler, M. D.

W. B. Saunders Company, Philadelphia and London: Operations of General Surgery, by Thomas G. Orr, M. D. Manual of Military Neuropsychiatry, by Harry C. Solomon, M. D. and Paul I. Yakovlev, M. D.